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A SURVEY OF THE EDUCATIONAL NEEDS OF MULTI-HANDICAPPED VISUALLY IMPAIRED CHILDREN AND IMPLICATIONS FOR THE DEVELOPMENT OF INSTRUCTIONAL MATERIALS

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ABSTRACT

A Survey of the Educational Needs of Multi-Handicapped Visually Impaired Children and Implications for the Development of Instructional Materials

The purpose of this study was to survey the needs of the multi-handicapped visually impaired (mhvi) child in order to formulate implications for the development of instructional materials. The mhvi child was interpreted as a child who has more than one educationally significant handicapping condition, one of which is visual impairment.

Replies to a two-part questionnaire were received from 258 of 293 organizations which had been identified as possibly having educational programs for mhvi children. Ninety-six of these did not meet the criteria for this study; three indicated they were unable to participate. Information was reported on 3,443 mhvi children from 159 organizations.

There was an average of 3.28 handicaps per child reported. Visual impairment, mental retardation, speech defect, and emotional disturbance were the most frequently occurring handicapping conditions. Non-attending behavior, emotional disturbance, experiential deprivation, language and communication problems, and the inability properly to process information and stimuli were the most frequently mentioned problems. Thirty-seven percent of the children reported were classified as totally blind, while 43 percent had a visual acuity of 20/200 or less.

Communication skills development was identified as the area of most significant educational concern. Twenty-four percent of the children reported were considered to be non-verbal. Twelve percent were identified as using neither braille, print, nor listening modes. Braille users comprised 28 percent of the children reported. Twenty-nine percent used large type and 27 percent used listening materials only.

Most of the mhvi children reported were depicted as having complex needs. Seventy-six percent were classified as requiring individualized instruction most of the time.

The curriculum of these children was characterized as being very elementary and devoted largely to teaching basic skills and concepts. It was suggested that the focus of the curriculum be life- and experience-centered. The types of instructional materials suggested were very similar to materials which are used by very young children.

The questionnaire study was followed up by visits to a number of selected programsfor mhvi children.

Chapter 1

A DESCRIPTION AND EXPLANATION OF THE STUDY

The description and explanation of the study involves a statement of its boundaries, and a discussion of the study in perspective to the status of the handicapped person. It points out the need for an investigation of this nature. Much of this chapter is based on a review of literature concerning the multi-handicapped visually impaired child (mhvi).

STATEMENT OF THE STUDY

Purpose of the Study

The purpose of this study was to survey the needs of the mhvi child in order to formulate implications for the development of instructional materials.

Scope of the Study

The population under consideration was limited to a group which had visual impairment as one of its commonalities. This factor not only gave some boundary lines in the study but it also meant that there might be an area of similar needs with similar ways of meeting these needs.

To speak of children with multiple handicaps does not mean that one is categorizing a group with a high degree of homogeneity.[1] Included may be children with two or more of the following handicaps: emotional disturbance, mental retardation, brain injury, epilepsy, hearing loss, visual impairment and other disabilities. The variety of functional situations may be far greater than this list of handicapping conditions implies. This heterogeneity necessitates two considerations:

1. Viewing each child as an individual with varying abilities is especially vital.

2. Implications for programming must be broad enough to include a variety of handicapping conditions. Individualization becomes especially significant in searching for generalizations which may serve as the basis for guidelines.

Limitations of the Study

The population under investigation in this study was limited to children, ages 0-21, who were involved in established educational programs. Studies indicate that the majority of these children function at a development level below 7th grade or that of the normal 12 year

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[1]W. M. Cruickshank, "The Multiple-Handicapped Child and Courageous Action," International Journal for the Education of the Blind, 13:75, March, 1964.

old,[2,3,4] thus, making probable a greater degree of homogeneity than reflected by the chronological age span.

Definitions of Terms

The following is an explanation of the use of the more significant terms of the study.

The multi-handicapped visually impaired (mhvi) child. For the purposes of this study the mhvi child was interpreted as a child who has more than one educationally significant handicapping condition, one of which is visual impairment.

An educationally significant handicap. A handicapping condition which requires special educational provision or therapy if the child is to be afforded the opportunity to achieve adequate or maximum potential was considered as an educationally significant handicap. In other words, a mhvi child must have special educational provision in the light of other handicapping conditions in

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[2]W. S. Curtis, "The Evaluation of Verbal Performance in Multiply Handicapped Blind Children," Exceptional Children, 32:373, February, 1966.

[3]C. Lewis Martin and John T. Travis, Exceptional Children: A Special Ministry (Valley Forge, Pennsylvania: The Judson Press, 1968), p. 20.

[4]Berthold Lowenfeld, "Multihandicapped-Blind and Deaf-Blind Children in California," American Foundation for the Blind Research Bulletin, 19:16, June, 1969.

addition to those made for his visual impairment.[5,6]

The visually impaired child. A child with visual impairment has interference with one or more of the visual functions.[7,8] The legal definition of blindness does not include as broad a scope as does the term visual impairment. The legal definition includes children with a:

> central visual acuity of 20/200 or less in the better eye with correcting glasses, or a peripheral field so contracted that the widest diameter of such field subtends an angular distance no greater than 20 degrees.[9]

Children with visual impairment would include both those children who are legally blind and others with better partial vision than the preceding definition would allow.

Educational needs. Educational needs are those needs, defined by societal expectations and the child's own

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[5]F. G. Bucknam, "Multiple-Handicapped Blind Children (an incidence survey)," International Journal for the Education of the Blind, 15:46, December, 1965.

[6]Pauline M. Moor, "Who Are the Children and What Are They Like?" International Journal for the Education of the Blind, 15:20-21, October, 1965.

[7]James M. Wolf, The Blind Child with Concomitant Disabilities (New York: The American Foundation for the Blind, 1967), pp. 3-4.

[8]I. P. Schloss, "Implications of Altering the Definition of Blindness," American Foundation for the Blind Research Bulletin, 3:115, August, 1963.

[9]American Printing House for the Blind, Inc: Its History, Purposes, and Policies (Louisville: American Printing House for the Blind, 1966), p. 8.

tension system, which may reasonably be met as the result of an educational program.[10]

Implications for instructional materials. Implications for instructional materials were looked upon as those suggestions of specific materials and general principles concerning materials which would aid in meeting the educational needs of mhvi children.

THE STUDY IN PERSPECTIVE

The Challenge of Handicapped Children

Our nation is faced with the challenge of meeting the needs of 5,000,000 handicapped children.[11] Dybwad estimates the percentage of exceptional individuals:

> It is estimated that twelve and one-half per cent of the school children in the United States are "exceptional children" who by reason of chronic illness or physical disability, social or emotional disorders, limited or generous mental endowment, need special attention and specialized facilities or services.[12]

It should be noted that included in this percentage are those exceptional persons who deviate from the average

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[10]Frederick J. McDonald, Educational Psychology (Belmont, California: Wadsworth Publishing Company, 1965), p. 151.

[11]U. S. Office of Education, Bureau of Education for the Handicapped, Policies and Procedures, Centers for Deaf-Blind Children, Elementary and Secondary Education Act, Title VI, Part C (Washington: Government Printing Office, April, 1969), p. i.

[12]Gunnar Dybwad, "Not All of One Mold," International Journal of Religious Education, 37:16, May, 1961.

because of superior ability. One out of every 16 births today is a child with neurological impairment.[13] Recent studies indicate that disabilities tend to occur in multiplicities; a large percentage of handicapped children may, therefore, have more than one disability.[14,15] The United States Office of Education reported an increase in the number of multi-handicapped children in the following comment on the rubella epidemics:

> In 1963-65, an estimated 20,000 to 30,000 children were affected by the German measles (rubella) epidemics which swept the nation. As a result there has been a sharp increase in multiply handicapped children. Many of these children have both auditory and visual impairments, as well as other handicapping conditions that may cause difficulties in mobility and learning.[16]

The Lack of Research and Information on Multi-Handicapped Visually Impaired Children

Although the interest in, and services for, the multi-handicapped child have substantially increased during the last decade, research of high quality is vastly limited. Harley, in a review on recent literature, notes that, although there are many articles on the subject, only

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[13]Moor, "Who Are the Children," p. 21.

[14]W. C. Geer, "Some Reflections on Where We Are and Where We Are Going in Special Education," Proceedings of the American Association of Instructors of the Blind, 47:9, June, 1964.

[15]Wolf, The Blind Child, p. 8.

[16]USOE, loc. cit.

few of these are based on empirical research.[17] DiMichael cites a lack of research with the retarded blind, one of the largest groupings of multi-handicapped visually impaired children.[18] Kenyon says that there is much more that we do not know than there is that we do know about mhvi children.[19] Thus, what is expressed about the multi-handicapped child is often only a viewpoint, even though this may be based upon a considerable amount of experience.[20] Wolf points out that the lack of accurate data hinders educational planning,[21] and that there is an absence of precise methodology for the teaching of these children.[22] Gall states that those employed in work with the disabled, in general, are hampered by the lack of

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[17]Randall K. Harley, "A Review of Recent Literature on the Multi-Handicapped Child and Related Areas," Proceedings of the American Association of Instructors of the Blind, 48:44, June, 1966.

[18]Salvatore G. DiMichael, "Meeting the Needs of Retarded Blind Children," Proceedings of the American Association of Instructors of the Blind, 43:15, June, 1956.

[19]Eunice L. Kenyon, "The Multiple Handicapped Blind Child," Proceedings of the American Association of Instructors of the Blind, 47:17, June, 1964.

[20]E. J. Waterhouse, "The Multiple Handicapped Blind Child," Proceedings of the American Association of Instructors of the Blind, 47:28, June, 1964.

[21]Wolf, The Blind Child, p. 2.

[22]Wolf, "Multiple Disabilities: An Old Problem with a New Challenge," New Outlook for the Blind, 59:269, October, 1965.

organized, consumable, clear-cut research findings.[23] The lack of professional-level expertise is influenced by the need for precise definitions, the numerous combinations of disabilities, inadequate sampling, and overwhelming pressure in other areas of need.[24]

There are a number of hopeful signs on the horizon. Cruickshank observes that programs for the deaf-blind are beginning to afford a degree of historical perspective and that this area has been kept before the public by outstanding persons such as Helen Keller.[25] He asserts, however, the need to keep in mind that the majority of multi-handicapped persons cannot be classified in this one limited group. He also suggests the establishment of several excellent research centers throughout the United States.[26] A step in the right direction may be the establishment of comprehensive regional centers for deaf-blind children as provided for by Public Law 90-247 which was signed on January 2, 1968.[27] Nolan and Ashcroft sound

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[23]Elena D. Gall, "Needed Research in the Field of Services for the Multiple-Handicapped Blind," Blindness Research: The Expanding Frontiers, eds. Maxwell H. Goldberg and John R. Swinton (University Park: Pennsylvania State University Press, 1969), p. 449.

[24]Ibid.

[25]Cruickshank, "The Multiple-Handicapped Child," pp. 65-66.

[26]Ibid., p. 70.

[27]USOE, loc. cit.

a note of hope for the present and future in the work with the multi-handicapped visually impaired child. They state:

> Though much remains to be done, the outlook is promising in terms of interest in the group, application of known techniques from other areas, and objective appraisal of the outcomes of treatment efforts.[28]

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[28]Carson Y. Nolan and S. C. Ashcroft, "The Visually Handicapped," Review of Educational Research, 39:67, February, 1969.

Chapter 2

REVIEW OF RELATED LITERATURE AND RESEARCH

This review of literature outlines the answer to three basic questions:

1. What are the educationally significant facts about the mhvi child?

2. What educational provisions are presently being made?

3. What major guidelines are being held as significant in determining directions for programming?

The following chapter deals both with currently held theory and actual practices.

THE MHVI CHILD

Terminology

The literature reveals a multiplicity of terms used to describe the mhvi child. Among these are doubly afflicted, doubly defective, dual handicapped, doubly handicapped, multi-handicapped, multiple handicapped, multiply handicapped, additionally handicapped, multiply exceptional, multiply disabled, and the blind child with concomitant disabilities. There appears to be no consistent pattern for the use of these terms.

Cruickshank refers to the multi-handicapped child as

> . . . any child with more than one physical or mental disability which requires special services or which makes his adjustment impossible in the home or in the regular class of his neighborhood school . . . .[1]

Moor defines the multiply impaired blind child as ". . . one who needs special assistance in order to function in an educative program."[2] Wolf indicates that a variety of terms have been utilized to

> . . . designate children with two or more disabilities so severe as to make it impossible for them to profit satisfactorily from an educational program established for any one of the disabilities.[3]

Lowenfeld states that

> . . . multi-handicapped children are defined as visually handicapped children with other marked handicaps who for reason of their combination of handicaps cannot or should not be admitted to, and cannot profit satisfactorily from, classes provided for blind, mentally retarded, or other handicapped children.[4]

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[1]W. M. Cruickshank, "The Multiple-Handicapped Child and Courageous Action," International Journal for the Education of the Blind, 13:66, March, 1964.

[2]Pauline M. Moor, "Who Are the Children and What Are They Like?" International Journal for the Education of the Blind, 15:20-21, October, 1965.

[3]James M. Wolf, "Multiple Disabilities: An Old Problem with a New Challenge," New Outlook for the Blind, 59:265, October, 1965.

[4]Berthold Lowenfeld, "Multihandicapped-Blind and Deaf-Blind Children in California," American Foundation for the Blind Research Bulletin, 19:72, June, 1969.

All these definitions point up several common characteristics. The mhvi person is:

1. A person who has more than one handicapping condition, one of which is visual impairment.

2. A person whose handicapping conditions require special educational provision and/or therapy.

3. A person whose combination of handicapping conditions makes it difficult for him to benefit from a program established for any one of the disabilities.

Wolf reviews the uses of the terms impairment, disability, and handicap. There is no commonly agreed upon usage of these terms, and they are often used interchangeably.[5] Stevens, in proposing a taxonomy in special education for children with body disorders, deals with the problem of terminology. He considers the term handicap to have a broader meaning than impairment and includes the consideration that a person is handicapped ". . . in the learning situation . . . when [confronted with] certain demands which he cannot meet or resolve adequately."[6]

Incidence and Prevalence Studies

Disabilities tend to occur in multiplicities; it appears, therefore, that the majority of handicapped

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[5]Wolf, "Multiple Disabilities," p. 266.

[6]G. D. Stevens, Taxonomy in Special Education for Children with Body Disorders (Pittsburgh: University of Pittsburgh, 1962), p. 65.

children may have more than one disability.[7,8] Stifler and colleagues found that 70 percent of 412 handicapped children studied had three to six additional disabilities while only 8 percent had one handicap.[9] In a study of handicapped children in Georgia, Wishik found an average of 2.2 disabilities per child.[10] In North Carolina, Richardson and Higgins found an average of 1.63 disabilities per handicapped child.[11]

A large number of visually impaired persons are multi-handicapped. Cruickshank and Trippe in a study of services in New York State report that approximately one-third of all blind persons studied had additional

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[7]W. C. Geer, "Some Reflections on Where We Are and Where We Are Going in Special Education," Proceedings of the American Association of Instructors of the Blind, 47:9, June, 1964.

[8]James M. Wolf, The Blind Child with Concomitant Disabilities (New York: The American Foundation for the Blind, 1967), pp. 8-9.

[9]J. R. Stifler and others, "Follow-Up Study of Children Seen in the Diagnostic Centers for Handicapped Children," American Journal of Public Health, 53:1746, November, 1963.

[10]S. M. Wishik, "Handicapped Children in Georgia: A Study of Prevalence, Disability, Needs and Resources," American Journal of Public Health, 46:201, February, 1956.

[11]W. P. Richardson and C. A. Higgins, "A Survey of Handicapping Conditions and Handicapped Children in Alamance County, North Carolina," American Journal of Public Health, 54:1827, November, 1964.

disabilities.[12] Dauwalder utilized the statements of ophthalmologists in reporting an incidence of 24.52 percent of multiply handicapped children among the totally blind studied and 21.24 percent of the legally blind.[13] Bucknam did an intensive study of 137 children and found handicaps in addition to blindness occurring in 96 of the 137 children, all under the age of 21 and enrolled in residential schools.[14] Wolf, in a comprehensive survey of residential schools, found that, according to IQ scores, 25 percent of 4,711 visually impaired children were mentally retarded.[15] The American Printing House for the Blind keeps a registration of legally blind children (below age 21) who are enrolled in publicly supported educational organizations. Of the January 1, 1968, registration, 16.47 percent were listed as being multi-handicapped.[16] Lowenfeld, in a

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[12]W. M. Cruickshank and M. J. Trippe, Services to Blind Children in New York State (Syracuse: Syracuse University Press, 1959), p. 82.

[13]Donald D. Dauwalder, Education, Training and Employment of the Blind (Pittsburgh: Western Pennsylvania School for the Blind, 1964), p. 168.

[14]F. G. Bucknam, "Multiple-Handicapped Blind Children (An Incidence Survey)," International Journal for the Education of the Blind, 15:47, December, 1965.

[15]Wolf, The Blind Child, p. 48.

[16]American Printing House for the Blind, "Summary of Grade Placement of Multi-Handicapped Visually Handicapped Students by State Departments and Residential Schools" (Louisville: American Printing House for the Blind, 1968), p. 10. (Mimeographed.)

fairly extensive study of California, found that, when including the state hospital population, multi-handicapped blind children of school age (1,919) outnumber "normal" blind (1,111) by 19 to 11.[17]

Graham says that there are 15,000 multi-handicapped blind children below age 21 in the United States.[18] Cicenia, Belton, Myers and Munday say that there are between 10,000 and 20,000.[19] Frampton indicates that there are as many as 50,000 multi-handicapped blind children.[20] Lowenfeld in his study, located 2,397 multi-handicapped blind children in the state of California alone.[21] On the basis of a 1968 survey of state institutions for the retarded, McDade projects that there are between 16,000 and 24,000 individuals in the United States who are both blind and mentally retarded (this figure also

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[17]Lowenfeld, "Multihandicapped-Blind," p. 17.

[18]Milton D. Graham, Multiply-Impaired Blind Children: A National Problem (New York: American Foundation for the Blind, 1968), p. 1.

[19]E. F. Cicenia and others, "The Blind Child with Multiple Handicaps: A Challenge, Part I," International Journal for the Education of the Blind, 14:65, March, 1965.

[20]New York Institute for the Education of the Blind, Forgotten Children: A New Project of the New York Institute for the Education of the Blind (New York: New York Institute for the Education of the Blind, 1969), p. 8.

[21]Lowenfeld, "Multihandicapped-Blind," p. 31.

includes persons over 21 years of age).[22] Ashcroft indicates that there are large numbers in other states:

> We know from numerous surveys in many states that each has a sizable number of children who are not provided for in any type of educational service because they do not neatly classify for service in terms of legal, administrative, medical, or educational categories available.[23]

There are numerous reasons for differences in statistical reports of the number of mhvi children. Some children are not presently enrolled in any formal program of education. These children may or may not be located for a particular study. Wolf reports that, during the 1964-1965 school year, each of the forty-eight residential schools he studied refused to admit an average of 3.5 blind children because of their low intelligence.[24] Doubtless, others never made application for admittance. Chase reported that, in New Jersey, the multiple-problem children comprise approximately 50 percent of the preschool case load.[25] Another reason for the inconsistency in numbers

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[22]Paul R. McDade, "The Importance of Motor Development and Mobility Skills for the Institutionalized Blind Mentally Retarded," New Outlook for the Blind, 63:313, December, 1969.

[23]S. C. Ashcroft, "Delineating the Possible for the Multi-Handicapped Child with Visual Impairments," International Journal for the Education of the Blind, 16:54, December, 1966.

[24]Wolf, The Blind Child, p. 48.

[25]Joan B. Chase, "The Multiple Handicapped Blind Child: Implementation of Program," Proceedings of the

reported is the fact that many visually impaired children who have other disabilities are in programs for handicaps other than visual loss. Lack of consistent definitions and terminology has also resulted in contradictory reports.[26]

Studies of this group of children show that ". . . no considerable decrease in their numbers can be expected within the foreseeable future."[27] Moor recognizes ". . . that there is an increasing number of blind children with additional impairments . . . ."[28] Dauwalder also estimates increases in the number of multi-handicapped children in the future.[29] Recent surveys usually show higher incidence rates than earlier ones.

The U. S. Office of Education cites a sharp increase in numbers of mhvi children and relates much of this to the 1963-1965 rubella epidemics which swept the nation.[30] The expanding birth rate, reduction of infant

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American Association of Instructors of the Blind, 47:19, June, 1964.

[26]Elena D. Gall, "Needed Research in the Field of Services for the Multiple-Handicapped Blind," Blindness Research: The Expanding Frontiers, eds. Maxwell H. Goldberg and John R. Swinton (University Park: Pennsylvania State University Press, 1969), p. 449.

[27]Lowenfeld, "Multihandicapped-Blind," p. 15.

[28]Moor, "Who Are the Children," p. 21.

[29]Dauwalder, Education, p. 168.

[30]U. S. Office of Education, Bureau of Education for the Handicapped, Policies and Procedures, Centers for

mortality, high survival rate of premature infants, and a number of advances in medical science are cited by Wolf and Anderson as being associated with the increased number of children with multiple disabilities.[31] They state that

> . . . a large number of these children who are saved today because of advances of medical science often must live out their remaining years under the handicap of one or more disability.[32]

Categorization

Diversity in multi-handicapped children accents the need for adequate categorization or grouping processes. Wolf points out that there has been a

> . . . professional preoccupation with classification schemes that lean heavily on medical systems which categorize children by pathological descriptions.[33]

This is evidenced in the five major groupings of mhvi children as outlined by Cruickshank. These are: blind mentally retarded child, blind emotionally disturbed child, blind brain-injured child, blind children with physical disabilities, and the blind-deaf.[34] Nine handicapping

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Deaf-Blind Children, Elementary and Secondary Education Act, Title VI, Part C (Washington: Government Printing Office, April, 1969), p. i.

[31]James M. Wolf and Robert M. Anderson, The Multiply Handicapped Child (Springfield: Charles C. Thomas, 1969), p. 7.

[32]Ibid.

[33]Wolf, "Multiple Disabilities," p. 266.

[34]Cruickshank, "The Multiple-Handicapped Child," p. 70.

conditions which occur with visual impairment are named in the 1955 American Printing House for the Blind survey of mhvi children. These are: mental retardation, orthopedic, acoustic, speech, socio-emotional, epileptic, deaf, cardiac, and glandular.[35] Cox's analysis of the individual differences investigates six areas: vision, hearing, mental development, speech and language development, heart, and motor development.[36]

Quay sees a weakness in current grouping practices because the educator is forced to deal with children who ". . . are far from homogeneous in regard to abilities or disabilities crucial to classroom learning."[37] Stevens sees a danger in classification systems which are preoccupied with disability.[38]

Although they do not see this as being reflected in the more recent research or general works in special

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[35]American Printing House for the Blind, "Report: Survey of Multiple-Handicapped, Visually Handicapped" (Louisville: American Printing House for the Blind, 1955), p. 3. (Mimeographed.)

[36]Lois V. Cox, "The Maryland School for the Blind Summer Day School Program for Pre-School Multi-Handicapped Blind Children," International Journal for the Education of the Blind, 18:98, December, 1968.

[37]Herbert C. Quay, "The Facets of Educational Exceptionality: A Conceptual Framework for Assessment, Grouping, and Instruction," Exceptional Children, 35:25, September, 1968.

[38]Stevens, Taxonomy, p. v.

education, Nolan and Ashcroft acknowledge the statements of key educators encouraging a change away from traditional categories.[39] Stevens indicates that classification schemes must be based on questions which have educational relevance and ". . . which will provide the basis for sound educational modifications . . . ."[40] Quay expresses the hope that some educationally relevant homogeneities might be formulated from a study of children grouped according to their learning characteristics, and utilizing the relationship of the characteristics to the instructional process.[41]

A number of experimental programs for mhvi children utilize groupings which are functional in nature. Cicenia and his colleagues divided the children in their study into three groups: non-verbal, pre-verbal, and verbal.[42] Curtis indicates the significance of a verbal age when it is compared with the physiological, intellectual and

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[39]Carson Y. Nolan and S. C. Ashcroft, "The Visually Handicapped," Review of Educational Research, 39:53, February, 1969.

[40]Stevens, op. cit., p. 3.

[41]Quay, op. cit., p. 26.

[42]E. F. Cicenia and others, "The Blind Child with Multiple Handicaps: A Challenge, Part II," International Journal for the Education of the Blind, 14:108, May, 1965.

educational age of the child.[43]

DiMichael gives a fairly common grouping for the mentally retarded blind. He sees these children classified educationally into three ability groups: the educable, the trainable, and the totally dependent.[44] Winn finds information on behavior and background experiences as well as factors relating largely to medical diagnosis, vital in educational programming.[45]

Cicenia and colleagues of the Edward R. Johnstone Training and Research Center suggest three bases for organizing the experiences of mhvi children. The three phases of the program at the center were management, academics and motor.

> Management . . . [refers to] experiences that would ordinarily be carried out in the home by the child's family . . . . Academics . . . [are the] formal aspects of training in skills and tasks . . . . Motor . . . [includes] all those experiences essential for physical coordination and development.[46]

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[43]W. S. Curtis, "The Evaluation of Verbal Performance in Multiply Handicapped Blind Children," Exceptional Children, 32:368, February, 1966.

[44]Salvatore G. DiMichael, "Meeting the Needs of Retarded Blind Children," Proceedings of the American Association of Instructors of the Blind, 43:16, June, 1956.

[45]Robert J. Winn, Jr., "Two Year Progress Analysis of Project for Multi-Handicapped Visually-Impaired Children at the Texas School for the Blind," International Journal for the Education of the Blind, 18:102-103, December, 1968.

[46]Cicenia and others, "The Blind Child, Part II," p. 106.

A question is raised as to whether there should be separate facilities for the mhvi child or whether these should be integrated with programming for children with other handicapping conditions. Regler concluded that it was advisable to have separate living quarters and educational facilities--especially for the young child.[47] A number of organizations have selected ungraded special classes as the best structure for mhvi children.[48,49,50] Some children can be integrated into some phases of the program for children with fewer handicapping conditions.[51,52] When the child can function adequately in these programs, this helps to prevent isolation and

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[47]Jerry Regler, "An Experimental Program for Slowly Developing Blind Children," International Journal for the Education of the Blind, 9:92, May, 1960.

[48]Toshi Tekawa, "Multi-Handicapped Blind Children at the California School for the Blind," Education of the Visually Handicapped, 1:63, May, 1969.

[49]F. C. Budds, "Some Initial Experiences with Mentally Handicapped Children Who Are Attending Schools for the Blind," International Journal for the Education of the Blind, 10:16, October, 1960.

[50]Mary O'Meara, "An Experimental Program at the Illinois Braille and Sight Saving School for Developmentally Delayed, Visually Impaired Children," International Journal for the Education of the Blind, 16:19, October, 1966.

[51]Winn, op. cit., p. 101.

[52]Cicenia and others, "The Blind Child, Part II," p. 112.

utilizes available facilities.[53]

Zwarensteyn and Zerby point out the need for individual programming and instruction. They assert:

> The multiple-handicapped blind child cannot tolerate the regular classroom any more than he can the regular dormitory. Furthermore, much of his instruction must be individualized and experimental in approach.[54]

Others concur that there is a need for a highly individualized program, and see group instruction as having only limited benefit.[55,56]

Program placement is sometimes made on the basis of an attempt to decide which handicap is the most significant. Brown raises the question of dominant handicap. He cautions that the dominant handicap at a particular time in a child's development may not always remain the dominant handicap.[57] Wolf further questions the attempt to determine the dominant handicapping condition. He surmises that

> little purpose is served by attempting to determine which is the major, or primary disability. The

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[53]Sarah B. Zwarensteyn and Margaret Zerby, "A Residential School Program for Multi-Handicapped Blind Children," New Outlook for the Blind, 56:194, June, 1962.

[54]Ibid.

[55]O'Meara, loc. cit.

[56]Regler, loc. cit.

[57]M. S. C. Brown, "The Multiple Handicapped Blind Child," Proceedings of the American Association of Instructors of the Blind, 47:21, June, 1964.

> concern might better be directed to determining which conditions are reversible and which are irreversible.[58]

Graham infers that much of the debate as to which handicap is primary represents futile exercises. He states:

> A great deal of valuable data has been wasted in the discussion over which of several disabilities is primary and which is secondary, which should be treated medically first and which should be considered first in the education of the child . . . .[59]

Graham cites the Oregon Severity Rating Scale for Multiply-Impaired Children as a tool for educational purposes, especially in assessing estimated academic load and non-academic needs.[60]

Evaluation

The question of how to evaluate the multi-handicapped visually impaired child is quite complicated. Brown recognizes that we have only very limited means and staff for objective testing against which to set our more personal assessment.[61] Wolf draws attention to inadequacies of assessment instruments and methods with this group of children.[62] Gruber and Moor further illustrate

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[58]Wolf, The Blind Child, p. 62.

[59]Milton D. Graham, "Multiply-Impaired Children: An Experimental Severity Rating Scale," New Outlook for the Blind, 62:73, March, 1968.

[60]Ibid., p. 79.

[61]Brown, op. cit., p. 23.

[62]Wolf, "Multiple Disabilities," p. 268.

the problems of evaluation:

> The process of appraisal of the blind child becomes complicated when additional deviations are present. Not only do the few standardized tests cease to be guides, but also the norms of child development become less useful. The child then becomes a truly unique case and a psychological appraisal of him becomes as challenging as is the medical one.[63]

Haspiel, in discussing auditory evaluation, says that much of the information is obtained through observation of the child's responses rather than through formal testing responses.[64] The questioning of the validity of formal tests does not mean that objective tools are not being used. Bennett and Oellerich indicate that a combination of standardized tests, observation, and clinical judgment is the most widely accepted method of evaluation of these multi-handicapped persons.[65]

Evaluation is best done by a team of experts from many pertinent areas. Cohen says that ". . . professional understanding, based on the teamwork of several professions, is necessary for diagnostic evaluation of each

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[63]Kathern F. Gruber and Pauline M. Moor (eds.), No Place to Go (New York: American Foundation for the Blind, 1963), p. 26.

[64]George S. Haspiel, "Communication Breakdown in the Blind Emotionally Disturbed Child," New Outlook for the Blind, 59:99, March, 1965.

[65]Fay Bennett and D. W. Ollerich, "Institutional Facilities for the Visually Handicapped Mentally Retarded: Results of a Survey," New Outlook for the Blind, 60:234, October, 1966.

child."[66] Donlon asserts that only when professionals from various fields communicate with one another can a clear view of the individual may be formed.[67] Curtis describes the philosophy of the comprehensive diagnostic and evaluation service for multiply handicapped blind children provided since 1957 by the Syracuse University Center:

> It is because of the complex behavior patterns of such multiple disabilities that a multidisciplinary evaluation team consisting of specialists in pediatrics, neurology, ophthalmology, psychology, speech pathology, audiology, social work, and special education examines each child.[68]

Brown supports the hypothesis that no school placement should be made without a residential assessment. He says:

> You have to live and work with these children in order to know what they can do, what is their best functioning power, and this I think can be achieved by residential assessment. It may last a week, it may last a month, it may last three to six years.[69]

It may take a period of years to learn the extent of a child's problems and abilities and to mobilize resources in

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[66] Jerome Cohen, "The Effects of Blindness on Children's Development," New Outlook for the Blind, 60:153, May, 1966.

[67] Edward T. Donlon, "An Evaluation Center for the Blind Child with Multiple Handicaps," International Journal for the Education of the Blind, 13:78, March, 1964.

[68] Curtis, "The Evaluation of Verbal Performance," p. 367.

[69] Brown, op. cit., p. 22.

the light of this information.[70]

Still, some children remain an enigma. Moor talks about the children who defy the examiner and his efforts.[71] Graham states that many multiply impaired blind children cannot be tested.[72] Cicenia also finds this to be true, often because of the interference of emotional disturbance in the administration of formal tests and evaluation procedures.[73] Haspiel reports a breakdown in communication in blind emotionally disturbed children which makes necessary the development of new techniques for assessment.[74] Elonen and Cain refer to the frequency of misdiagnoses and to numerous contradictory diagnoses.[75] They:

> often found drastic diagnostic errors made primarily due to face-value acceptance of the child's presenting condition (particularly if assessed by a single psychological test) as representing his basic level of endowment.[76]

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[70]Merle Frampton and others, Forgotten Children, a Program for the Multihandicapped (Boston: Porter Sargent Publishers, 1969), p. 55.

[71]Pauline M. Moor, No Time to Lose (New York: American Foundation for the Blind, 1968), p. 4.

[72]Graham, "Multiply-Impaired Blind Children," p. 2.

[73]Cicenia and others, "The Blind Child with Multiple Handicaps, Part I," p. 70.

[74]Haspiel, op. cit., p. 98.

[75]Anna S. Elonen and A. C. Cain, "Diagnostic Evaluation and Treatment of Deviant Blind Children," American Journal of Orthopsychiatry, 34:625, July, 1964.

[76]Ibid., p. 628.

Zwarsteyn and Zerby cite reference to seven diagnoses on a single child, ranging all the way from "severely mentally retarded" to "normal intellectual potential."[77]

Level of Functioning

The majority of school age mhvi children function at an elementary level.[78] Martin and Travis suggest a limit on the developmental level of the majority of multi-handicapped children when they say that:

> . . . multiply handicapped children will learn more slowly than normal children and they will usually not achieve more than a fourth grade level of education.[79]

Of the 2,397 mhvi children located by Lowenfeld in the California study, 1,217 were patients in state hospitals. Of the remaining 1,180, 70 percent, or 829, were considered as being mentally retarded.[80] Mental retardation is considered as one of the most common handicapping conditions seen in the multi-handicapped child.[81]

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[77]Zwarensteyn and Zerby, op. cit., p. 191.

[78]Curtis, "The Evaluation of Verbal Performance," p. 373.

[79]C. Lewis Martin and John T. Travis, Exceptional Children: A Special Ministry (Valley Forge, Pennsylvania: The Judson Press, 1968), p. 20.

[80]Lowenfeld, "Multihandicapped-Blind," p. 31.

[81]Carol Halliday, "A Status Report Concerning the Multiple-Handicapped Blind Child" (unpublished Specialist in Education dissertation, George Peabody College, 1967), p. 82.

Donlon reports:

> The multiple-handicapped blind child nearly always has a poor prognosis. An adequate evaluation is the catalytic agent which begins the process toward a realistic and appropriate treatment program so that he has a better chance of developing his full potential.[82]

Elonen and Cain say that the mhvi child may be so developmentally retarded to a point that the basic skills remain at the infant level.[83] In the Saint Joseph School for the Blind program, Imelda found the fifth grade to be a maximal level of achievement.[84]

There are exceptions to this generalization of minimal progress. Cohen points out that some multi-handicapped children cannot be classified at this low level of functioning:

> We have seen children with gross multiple handicaps make good academic progress and develop apparently normal personalities without serious emotional problems.[85]

Norris, Spaulding, and Brodie assert that environmental factors are critical in the successful achievement by multi-handicapped children:

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[82]Donlon, "An Evaluation Center," p. 78.

[83]Elonen and Cain, "Diagnostic Evaluation," p. 625.

[84]Sister M. Rose Imelda, "The Saint Joseph School for the Blind Program," Proceedings of the American Association of Instructors of the Blind, 48:53, June, 1966.

[85]Cohen, "The Effects of Blindness," p. 152.

> Evidence from the study of the intensive group of children supports the hypothesis that favorable opportunities for learning as they have come to be understood by the staff are more important in determining the child's functioning level than such factors as his degree of blindness, his intelligence as measured by psychological tests, or the social, economic, or educational background of his parents. Even children with multiple physical handicaps have developed a more satisfactory level of functioning under favorable conditions than had been anticipated.[86]

Common Problems

Gall attributes the problems of the mhvi child to a major common etiology. She says that "blind persons having additional handicaps represent a group whose limitations and deviations stem mainly from injury to the central nervous system."[87] Cohen also speculates a high probability of neurological abnormality.[88]

Tupper suggests that there are common behavioral manifestations in this group of children:

> Children presenting the most problems do not fall into the same categories but they do seem to have the same symptoms and these are: developmental lag in all areas; lack of verbal communication, and in some cases absence of all communication, even gestures; unexplained and prolonged temper tantrums; self-destructive behavior; withdrawal, little reaction to adults or peers; echolalia; hyperactivity; lack of curiosity and interest in activities around them.[89]

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[86]Miriam Norris and others, Blindness in Children (Chicago: University of Chicago Press, 1957), p. 65.

[87]Gall, "Needed Research," p. 448.

[88]Cohen, "The Effects of Blindness," p. 151.

[89]LaVerne Tupper, "The Multiply Handicapped Blind Child in New York State," New Outlook for the Blind, 56:244, September, 1962.

Moor outlines a similar list:

> These children present certain common characteristics. They are generally slow to learn self-help skills such as dressing themselves, eating and taking care of their personal needs. Some seem to persist in certain behavior. They may resist new experiences and tend to react negatively, often in a self-protective manner to that which is strange or unfamiliar to them. Sometimes, they do not communicate verbally or they repeat what has just been said in the same tone of voice. Some children have motor patterns which appear bizarre. . . . Some have a different gait, a spastic-like walk or tiptoe step. Many have excellent memories and ability to recall. When one approaches, hopefully to help, they seem to have a tendency to ward off all kinds of intrusion.[90]

The most commonly cited problems of mhvi children are poor mobility,[91,92] retardation,[93] inadequate language development,[94] and emotional disturbance.[95]

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[90]Pauline M. Moor, "Services to Multiply Impaired Blind Children," Proceedings of the American Association of Instructors of the Blind, 48:39, June, 1966.

[91]Anna S. Elonen and S. B. Zwarensteyn, "Michigan's Summer Program for Multiple-Handicapped Blind," New Outlook for the Blind, 57:79, March, 1963.

[92]Gabrielle-Catherine Lairy, "Problems in the Adjustment of the Visually Impaired Child," New Outlook for the Blind, 63:37, February, 1969.

[93]Wolf, The Blind Child, p. 54.

[94]Elonen and Zwarensteyn, "Michigan's Summer Program," p. 80.

[95]Cicenia and others, "The Blind Child, Part I," p. 70.

EDUCATIONAL PROVISIONS AND TREATMENT

Lack of Provision

Services to the multi-handicapped child are especially limited. Many of their needs go unmet simply because there is no source of aid in dealing with the variety and combination of problems encountered. Ashcroft recognizes the fact that many children do not receive any type of educational provision because they do not neatly classify for services in terms of legal, administrative, medical, or educational categories available.[96]

Halliday, in a status report of the mhvi child, indicates that the lack of services is especially critical for the very young child. She says that

> . . . at the time when many developmental problems could, and should have been curtailed or alleviated--during the pre-school years--few helps of any kind are available.[97]

Lairy comments on the rarity of kindergartens for visually impaired children.[98]

Work with mhvi children has been seriously hampered by the lack of adequate diagnostic and evaluative services.[99] Often, the only major conclusion that can safely

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[96]Ashcroft, "Delineating the Possible," p. 54.

[97]Halliday, "A Status Report," p. 12.

[98]Lairy, "Problems," p. 36.

[99]Elonen and Zwarensteyn, "Michigan's Summer Program," p. 77.

be made is that the needs and problems of the children are very special, as well as severe.[100,101] This is one of the reasons that, although educators have expressed concern for children with multiple disabilities, little progress has been made in finding the solutions to the problems faced.[102] There is also a shortage of adequately trained personnel,[103] which gives little prospect for dealing with waiting lists in both residential and public school systems.[104] Root cites the fact that the inadequacy in meeting the needs of multi-handicapped children comes ". . . at a time when national and community agencies seem to hold the promise of universal medical, mental health, case-work and educational services . . . ."[105]

Jones and Collins report a substantial increase, during recent years, in services for children who have one or more major handicaps in addition to visual

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[100]Ferne K. Root, "Evaluation of Services for Multiple-Handicapped Blind Children," International Journal for the Education of the Blind, 13:33, December, 1963.

[101]Graham, Multiply-Impaired Blind Children, p. 1.

[102]Wolf, "Multiple Disabilities," p. 265.

[103]Eunice L. Kenyon, "The Multiple Handicapped Blind Child," Proceedings of the American Association of the Blind, 47:17, June, 1964.

[104]J. W. Jones and Anne P. Collins, Educational Programs for Visually Handicapped Children (Washington: U. S. Government Printing Office, 1966), p. 28.

[105]Root, "Evaluation," p. 33.

impairment.[106] A number of experimental programs have been established within the last decade. Consequently, in spite of the lack of services to the mhvi child, there is an increase in the number of services.

Program Goals

Cicenia and his associates discovered that the unmet needs of the children with whom they worked were quite different from, and more basic than, educational needs ordinarily anticipated in "going to school."[107] They report a major shift toward working at lower levels of achievement when they state that in their program

> the emphasis was changed from traditional schooling to that of self-care and general physical activities of daily living. . . . It was necessary to return to the "grass roots" level of initial interaction of the child with his environment in order to ameliorate many of the earlier experiences, or lack of experiences, which may have caused the child not to want to relate to objects and people in his environment.[108]

Tekawa indicates that the California School for the Blind emphasizes living skills, hand-and-finger dexterity, self care, and general mobility because ". . . few children are ready for any type of academic learning . . . ."[109]

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[106] Jones and Collins, Educational Programs, p. 27.

[107] Cicenia and others, "The Blind Child with Multiple Handicaps, Part I," p. 67.

[108] Ibid.

[109] Tekawa, "Multi-Handicapped Blind Children," p. 63.

Ashcroft discusses program goals when he says:

> The goals of our work . . . should not be "cure" of the problems. Rather the more modest goal of making the child's system "go" or function at whatever level possible should be sought. Hopefully, this goal will be changed frequently to new and improved levels of "go" . . . .[110]

Winn found a developmental, non-graded curriculum somewhat successful with mhvi children.[111]

Examination of twelve programs for mhvi children gives an indication of the types of goals deemed significant. These goals focus largely in the areas of communication, social interaction, and motility. The goals reported for these programs are summarized in Table 1.

Brown delineates four principles which govern the selection of goals for the mhvi children:

1. A secure developmental environment within which they can be tolerated, encouraged and helped to live in a community. . . .
2. Opportunities for the enlargement of the children's skills at all levels, by all means. . . .
3. Community living, both within and without the school. . . .
4. The greatest possible development of independence, not only independence of action but also independence of mobility.[112]

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[110]Ashcroft, "Delineating the Possible," p. 55.

[111]Winn, "Two-Year Progress Analysis," p. 101.

[112]Brown, "The Multiple Handicapped Blind Child," pp. 24-25.

Table 1

Analysis of Goals Expressed for Twelve Programs for MHVI Children

Developmental		Remedial	
Area	No. of Programs	Area	No. of Programs
Motility			
To develop the ability to move independently in new surroundings	2	Motor difficulties	7
To allow the child complete freedom to explore the environment	2	Awkward gross mobility	1
To help the child move spontaneously	1	Spastic motility patterns	1
Physiological development through motor activity	2	Poor orientation in familiar environment	1
Hand and finger dexterity	2	Tip-toe walking	1
Motor skills	2	Poor hand usage	1
Locomotion	1	Lack of simple skills such as opening door, etc.	1
Manual dexterity	1	Perpetual motion	1
Premobility skills	1	Rocking	1
Physical education	1	Eye poking	1
Total	15	Whirling	1
		Total	17

Table 1 (continued)

Developmental		Remedial	
Area	No. of Programs	Area	No. of Programs
Communication			
To develop listening comprehension	4	Speech problems	6
To develop communication skills	11	Lack of language	9
Understandings of words used in helping the child to begin to do things for himself	2	Echolalia	1
Speech	2		
Total	19	Total	16
Self Concept			
To develop an understanding of body image	1	Fear of the world	1
To develop a feeling of security	1	Depression	1
To develop self confidence	1		
Total	3	Total	2

Table 1 (continued)

Developmental		Remedial	
Area	No. of Programs	Area	No. of Programs
Social Interaction			
To develop relationships with peers	2	Isolation	1
To develop relationships with adults	2	Fear of the world	1
To develop competency in daily living skills (self care)	10	Slow in learning self-help skills	5
Build habits through the following of daily schedules	1	Autistic	2
To provide group experiences	1	Inability to relate to people or things	1
To help the child interact with his environment	1	Low tolerance threshold	1
To help the child understand and control his emotions	2	Aggressive	1
Total	19	Undesirable responses and adjustments	1
		Withdrawal	1
		Total	14
Sensory			
To develop response to auditory stimuli	8	Resistance to and poor tactual stimulation	2

Table 1 (continued)

Developmental		Remedial	
Area	No. of Programs	Area	No. of Programs
Sensory (continued)			
To develop response to tactual stimuli	8	Poor auditory reception	4
Olfactory development	1		
Visual training	1		
Total	18	Total	6
Cognitive			
Increased interest span	1	Pseudoretardation	1
Learn to follow directions	1	Short attention span	2
To attack and solve problems	2	Perseveration	1
To interpret the meaning of experiences	1	Lack of concentration	1
To organize and structure experiences	1		
To broaden the range of individual play	3		
To develop number concepts	2		
Concept formation and discrimination	1		
Total	12	Total	5

Table 1 (continued)

Developmental		Remedial	
Area	No. of Programs	Area	No. of Programs
Miscellaneous			
Subject-oriented curriculum	2	Strong food preferences	1
		Drug sedation	1
		Seizures	1
Total	2	Total	3

Information for this table was taken from reports on programs by the following organizations:

1. California School for the Blind
2. Edward R. Johnstone Training and Research Center
3. George Peabody College, Program for mhvi children
4. Illinois Braille and Sight Saving School
5. Jewish Guild for the Blind, New York City
6. Maryland School for the Blind
7. Michigan School for the Blind
8. Nebraska School for the Visually Handicapped
9. New York Institute for the Education of the Blind
10. Pacific State Hospital, Pomona, California
11. St. Joseph School for the Blind
12. Texas School for the Blind

Staffing Needed

Wolf and Anderson see the need for a number of disciplines in the effective management and education of the multi-handicapped child.[113] Most programs for multi-handicapped children utilize a multi-disciplinary team[114] or a structure of ancillary services.[115] Personnel are needed who have training in psychology, social work, psychiatry, medicine, orientation and mobility, and speech therapy.[116] Elonen and Polzien found that a director, a psychiatrist, pediatric care workers, a physiotherapist, two full-time psychologists, social workers, a nursery school teacher, aides, houseparents, secretarial and janitoral services were needed in their program.[117] Additionally, dietary workers are required in residential and often in day-care programs.[118]

More staff members are needed in a program for the child with more than one handicapping condition than are

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[113] Wolf and Anderson, The Multiply Handicapped Child, p. 6.

[114] Cicenia and others, "The Blind Child with Multiple Handicaps, Part I," p. 66.

[115] O'Meara, "An Experimental Program," p. 19.

[116] Cicenia and others, "The Blind Child with Multiple Handicaps, Part I," p. 66.

[117] Anna S. Elonen and Margaret Polzien, "Experimental Program for Deviant Blind Children," New Outlook for the Blind, 59:125, April, 1965.

[118] O'Meara, loc. cit.

needed in programs focusing on a single handicap. During the first two years of the Texas project, a five-to-one student to teacher ratio was maintained.[119] O'Meara reported a two-to-one or at maximum three-to-one pupil-teacher ratio in the Special Services Department of the Illinois Braille and Sight-Saving School.[120] Imelda found the need for a large number of volunteers.[121] Blanchard and colleagues were able to provide a broader program by the use of students from nearby colleges.[122]

Costs

Root says that pressing highly individualized needs of parents and children result in tremendous financial and personal problems.[123] Graham indicates that evaluations are far more complex and costly for multi-handicapped blind children than for "normal" blind children.[124] Cruickshank predicts that costs will continue to be high. He says:

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[119]Winn, "Two-Year Progress Analysis," p. 101.

[120]O'Meara, op. cit., p. 19.

[121]Imelda, "The Saint Joseph School," p. 52.

[122]Irene Blanchard and others, "Evaluation of an Educational Testing Program for the Retarded Blind Children," New Outlook for the Blind, 62:131, April, 1968.

[123]Root, "Evaluation," p. 33.

[124]Graham, Multiply-Impaired Blind Children, p. 2.

> The clinical diagnostic and educational program for multiple-handicapped blind children is costly and will continue to be costly. Superintendents, members of boards of trustees, commissioners of State departments of education and members of State legislatures must recognize that costs are great and are legitimate.[125]

Graham gives some indication of projected costs for individual programs. He says that

> . . . some existing programs cost about $5,000 per MI blind child per year. The Hope School for Blind Multiple-Handicapped Children estimates its cost at $7,000 per child per year.[126]

Imelda estimates a $3,000 per capital minimum cost in a school which receives a great deal of volunteer service.[127]

Curriculum Guidelines

Mode of learning. Guess says that ". . . an instrument is needed to assess the preferred modality of the blind retarded."[128] This need is critical for any mhvi child whether he is in a program that stresses a multi-sensory approach or in a program that is dominantly uni-sensory in emphasis.

Use of sense modalities must be taught. Guess says that "it is erroneously assumed that the blind naturally

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[125]Cruickshank, "The Multiple-Handicapped Child," p. 68.

[126]Graham, Multiply-Impaired Blind Children, p. 21.

[127]Imelda, "The Saint Joseph School," p. 52.

[128]Doug Guess, "Mental Retardation and Blindness: A Complex and Relatively Unexplored Dyad," Exceptional Children, 33:477, March, 1967.

make the best use of their remaining sense modalities."[129] DeLeo and Boly in a study of institutionalized subnormal blind found support for the hypothesis that multiply handicapped blind do not develop other sense modalities as readily as the so-called "normal blind."[130]

Best and Winn, on the basis of the Texas School for the Blind program for mhvi children, wrote concerning the matter of learning mode:

> It was found without exception that the auditory mode was far superior to the tactual or visual mode for the entire group. Listening comprehension in many cases measured two grade levels above reading comprehension.[131]

The use of braille, according to Winn, came into question as the best means for educational endeavors with the mhvi students. In fact, "the use of Braille as a major input for learning [was] . . . totally discarded for almost all children . . . ."[132] In a survey by the American Printing House for the Blind, only 11 percent of the total number of reported visually impaired children used neither braille nor large type, compared with 22 percent of those

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[129] Ibid.

[130] G. M. DeLeo and L. F. Boly, "Program for the Institutionalized Blind and Partially Sighted Mentally Subnormal," American Journal of Mental Deficiency, 61:140, July, 1956.

[131] John P. Best and Robert J. Winn, Jr., "A Place to Go in Texas," International Journal for the Education of the Blind, 18:5-6, March, 1968.

[132] Winn, "Two-Year Progress Analysis," p. 101.

classified as multi-handicapped who used neither braille nor large type.[133] This report, then, also lends support to the belief that braille and large type may not always be optimal media for mhvi children, who apparently need other learning modes.

Steele investigated the mode of learning of a group of blind children of low ability and found that in this study, subjects with relatively high braille comprehension levels learned more when reading braille, while subjects with relatively low levels of comprehension learned more when listening to the same materials.[134]

Nolan and Kederis found support for the belief ". . . that below a certain level of mental ability, braille ceases to be an effective medium for educational communication."[135] In the California School for the Blind program for mhvi children it was agreed that only Grade I braille should be attempted.[136] Only 3 out of 30 children in a program of the New York Institute for the Blind made

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[133]American Printing House for the Blind, "Summary of Grade Placement," p. 10.

[134]Nancy W. Steele, "Learning by Blind Children of Low Ability: The Relative Efficiency of Reading and Listening" (unpublished Doctor's dissertation, George Peabody College, 1969), p. 43.

[135]Carson Y. Nolan and Cleves J. Kederis, Perceptual Factors in Braille Word Recognition (New York: American Foundation for the Blind, 1969), p. 47.

[136]Tekawa, "Multi-Handicapped Blind Children," p. 64.

good use of their hands.[137] Thus, it would appear that among these multi-handicapped children, braille would be especially difficult.

Instructional materials. References to instructional materials most often refer to materials that might be used with younger children.[138,139] A number of organizations were able to use ". . . regular educational nursery materials."[140] Frampton, Kerney and Schattner say that most of the materials used they designed themselves.[141] Readiness materials and materials for the development of basic skills were also utilized.[142]

Graham says there is a need for more records and tapes than are presently available.[143] Best and Winn state that it has been difficult to find high-interest, low-vocabulary materials.[144]

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[137]Frampton and others, Forgotten Children, p. 95.

[138]Cox, "The Maryland School for the Blind," p. 97.

[139]Elonen and Zwarensteyn, "Michigan's Summer Program," p. 80.

[140]Frampton and others, op. cit., p. 186.

[141]Ibid.

[142]Best and Winn, "A Place to Go," p. 7.

[143]Graham, Multiply-Impaired Blind Children, p. 16.

[144]Best and Winn, loc. cit.

Methods and approaches. Any investigation of how to teach the multi-handicapped child raises the question of whether or not there are different methods for instruction. While the need for a different type of instruction has been implied there are few details or specific directions given as to the method that would be needed.[145] Bluhm suggests that it is important to experiment with every method possible.[146] Wolf emphasizes that there is ". . . a lack of precise methodology for teaching children with multiple disabilities."[147]

Literature concerning the mhvi child repeatedly expresses the need for an individualized approach.[148] Tretakoff asserts that some mhvi children cannot function in groups.[149]

A number of programs seek to stress an experience-centered curriculum.[150,151] This approach is sometimes

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[145]American Printing House for the Blind, "Report: Survey," p. 9.

[146]Donna L. Bluhm, Teaching the Retarded Visually Handicapped: Indeed They Are Children (Philadelphia: Saunders, 1968), p. 2.

[147]Wolf, "Multiple Disabilities," p. 269.

[148]Norris and others, Blindness in Children, p. 66.

[149]Maurice Tretakoff, "What They Are All Doing," Proceedings of the American Association of Instructors of the Blind, 48:42, June, 1966.

[150]Winn, "Two-Year Progress Analysis," p. 105.

[151]Cicenia and others, "The Blind Child with Multiple Handicaps, Part II," p. 105.

called a "controlled environment,"[152] one important feature of which is its being conducive to the development of positive relationships.[153,154]

Language and communication. Language and communication are especially significant areas of concern for those who work with mhvi children. Brown states that, although it may sound rather basic, if a child cannot communicate he is in danger of being socially unacceptable.[155] Tretakoff indicates that

> . . . the development of expressive language is [so] critical to the future training and education of blind multiple handicapped children that . . . without it, a child will be a candidate for custodial placement.[156]

Chase sees a close relationship between social skills and effective communications, both being of cardinal importance.[157]

Graham, in discussing the lack of communication skills, says:

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[152]Tretakoff, "What They Are All Doing," p. 42.

[153]Moor, "Services to Multiply Impaired Blind," p. 40.

[154]Cicenia and others, "The Blind Child with Multiple Handicaps, Part II," p. 106.

[155]Brown, "The Multiple Handicapped Blind Child," p. 25.

[156]Tretakoff, "What They Are All Doing," p. 43.

[157]Chase, "The Multiple Handicapped Blind Child," p. 20.

> That one third of the totally blind sample have no original language (or verbal communication) points up the severity of the problems of the whole group. As might be expected, there is proportionally much more lack of language among the under 6 year olds than in the other age groups.[158]

Frampton, Kerney, and Schattner express the need for language development to pervade the whole program for multi-handicapped children; in their own program, it was found to be the most comprehensive of any curriculum area.[159]

Rogow depicts the isolation that exists when a child is without language skills:

> The blind child without language is severely cut off from receiving and sending information and the longer his language development is delayed the deeper his isolation. The failure to use language to convey meaning, echolalia, and the insistence upon sameness are as depriving as they are symptomatic of the poor communication that exists between the child and his world. The child is both prisoner and engineer of his isolation.[160]

SIGNIFICANT GUIDELINES

The Thrust for Early Education

Many writers in the field of work with the blind emphasize the importance of early childhood

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[158] Graham, Multiply-Impaired Blind Children, p. 12.

[159] Frampton and Others, Forgotten Children, p. 180.

[160] Sally Rogow, "The Non-Verbal Blind Child," New Outlook for the Blind, 63:2, January, 1969.

experiences.[161] Brown indicates that early location and therapy are even more critical for the multiple handicapped blind child.[162] "The early childhood years of the retarded blind child," observes Bluhm, "are generally the most important years of his education because his patterns of behavior and learning habits are established at this period."[163] In the 1958 Maryland follow-up study of children who had been seen in diagnostic centers, early case finding was shown to be an important factor in the degree of improved functioning in later years.[164]

The alleviation of problems by preventing them is a major motivation for an emphasis on early education for mhvi children. Rigby speaks of "preventable" and "nonpreventable" handicaps.[165] "It is a much easier job to provide the healthy experiences in early childhood," says Harth, "than to treat the problems in later life."[166]

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[161]Robert Harth, "The Emotional Problems of People Who Are Blind: A Review," International Journal for the Education of the Blind, 15:57, December, 1965.

[162]Brown, "The Multiple Handicapped Blind Child," p. 21.

[163]Bluhm, Teaching the Retarded Visually Handicapped, p. viii.

[164]Stifler and others, "Follow-Up Study of Children," p. 1748.

[165]Mary E. Rigby, "Some of the Problems of the Multiply Handicapped," International Journal for the Education of the Blind, 12:101, May, 1963.

[166]Harth, loc. cit.

Gillman holds that reaching youngsters as early as possible is a preventive and supportive influence for the whole family.[167] Some writers stress that the early years are critical because they see this as a time when development can be enhanced. They believe that the complexity of handicaps, especially, requires early training.[168,169] Graham focuses on the ". . . preschool multiply impaired children whose needs are most severe."[170] In addition to these reasons, Brown adds that early identification is urged in order to give opportunity for the fullest medical and surgical investigations and to build up the fullest possible records and case histories.[171] Elonen and Cain summarize the reasons behind the belief in the early years as especially significant:

> Whether we speak of critical periods, or irreversibility, or the import of early learning, it is clear that with such children the earlier the

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[167]Arthur E. Gillman, "The Multiple Handicapped Blind Child: Diagnostic Studies of Emotionally Disturbed Blind and Visually Impaired Children: Verbal Facility Masking Concept Deficit," Proceedings of the American Association of Instructors of the Blind, 47:18, June, 1964.

[168]Moor, "Services to Multiply Impaired Blind," p. 39.

[169]Cox, "The Maryland School for the Blind," p. 99.

[170]Graham, Multiply-Impaired Blind Children, p. 3.

[171]Brown, "The Multiple Handicapped Blind Child," p. 21.

> opportunity for professional intervention and assistance, the more likely the therapeutic success.[172]

An Approach to the Family of the Handicapped Child

In making the proper and essential provision for mhvi children, Ashcroft says that "it is . . . necessary that the home and parents or parent surrogates be involved with the process."[173] Henderson implies that

> . . . assisting the parents in attaining realistic aspirations for their child becomes of increasing importance as additional handicaps are added to the diagnosis of mental retardation.[174]

Many difficulties of these children may result from the lack of this type of assistance for the family.[175,176] Elonen and Zwarensteyn believe that, with a number of the children with whom they worked, proper

> . . . diagnostic service could have prevented serious maladjustment and developmental and educational retardation had it been available to the parents . . . .[177]

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[172]Elonen and Cain, "Diagnostic Evaluation," p. 633.

[173]Ashcroft, "Delineating the Possible," p. 55.

[174]R. A. Henderson, "Teaching the Multiply Handicapped Retarded Child," Exceptional Children, 27:91, October, 1960.

[175]Lairy, "Problems in the Adjustment," p. 36.

[176]Bluhm, Teaching the Retarded Visually Handicapped, p. 45.

[177]Elonen and Zwarensteyn, "Michigan's Summer Program," p. 82.

Use of Community Resources

Moor advocates the use of community resources when she says:

> The existence and use of the appropriate community resources available to meet his needs will determine in large measure the "opportunities for learning" which the child will enjoy as well as his subsequent development.[178]

Sometimes there is a pressing need for foster home placement.[179] Salmon stresses

> . . . that deliberate and planned efforts must be launched to modify public attitudes and to create a more favorable community climate for the multi-disabled blind person.[180]

A list of services that might be performed by a number of community groups is suggested by Gruber and Moor.[181]

Root states that

> the pattern of communication among agencies is one of the most important factors to be considered in evaluating services and resources which may be available to multiple-handicapped blind children.[182]

We need to learn from workers in a number of areas of exceptionalities. This cooperation should help build up

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[178]Pauline M. Moor, "Blind Children with Developmental Problems," Children, 8:13, January-February, 1961.

[179]Regler, "An Experimental Program," p. 92.

[180]Peter J. Salmon, "Modern Program for Blind Persons with Other Disabilities," New Outlook for the Blind, 59:16, January, 1965.

[181]Gruber and Moor, No Place to Go, p. 11.

[182]Root, "Evaluation," p. 34.

worthwhile and documentary evidence in records and case studies.[183]

A Positive Approach

Stifler and colleagues in a Maryland study found room for hope in what could be done with multi-handicapped children. They report:

> Despite the complexity and severity of the disabilities of these children, the study showed that with adequate diagnosis and conscientious carrying out of the recommendations improvements do occur in a significant proportion of cases. Counseling, therapy, special education and other supportive services do alleviate the conditions and result in less severely handicapped children.[184]

The following quotation from Elonen and Polzien projects an element of encouragement:

> Of the children who had been perceived as retarded and for whom little hope had been held for developing adequately, many have begun to function in school situations and even the very slowest are showing some improvement. At present most of the children are far happier than when first seen, and certainly most families are more hopeful concerning the future of their child.[185]

Zwarensteyn and Zerby stress the fact that a person working with mhvi children must begin with the belief that the

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[183]Brown, "The Multiple Handicapped Blind Child," p. 26.

[184]Stifler and others, "Follow-Up Study of Children," p. 1750.

[185]Elonen and Polzien, "Experimental Program," p. 124.

child can be helped.[186]

SUMMARY

A review of the literature and research on the mhvi child revealed differing opinions and unanswered questions concerning educational theory and practices. Most of this was reported by persons involved in specific projects for mhvi children. Terminology was not well defined and was often used interchangeably. Reports from studies varied as to the prevalence of the mhvi child, but there were surveys which supported the statement that a substantial percentage of handicapped children have more than one handicap. An increase in the number of multi-handicapped children was projected for the foreseeable future.

Previous and current systems of classification have leaned heavily on medical categorizations. A number of educators urged a move toward schemes which have more educational relevance and which are functional in nature. Program placement is sometimes based on the determination of the dominant handicap. The wisdom of this has been called into question. Evaluative procedures were seen to be most effective when utilized, over a period of years, by a team of experts. Most current evaluative tools and

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[186]Zwarensteyn and Zerby, "A Residential School Program," p. 197.

methods have proved to be inadequate for use with mhvi children. Despite the use of the best resources available, some children remained enigmatic. A large percentage of mhvi children functioned at an elementary level and progress slowly. They often had inadequate language and mobility. Emotional disturbance and retardation were common diagnoses. An examination of goals for programs for mhvi children revealed a life-centered curriculum emphasizing such areas as communication, social interaction, and motility. A great deal of time was spent at the more basic levels of development. Lack of educational provisions, accented by high costs and the need for higher staff-to-student ratios, have resulted in many unmet needs. This is especially critical for the mhvi child in the preschool years when adequate educational resources can take on a significant problem-preventive nature. The number of services to mhvi children has increased in recent years.

Visual and tactual avenues were seen as less valuable as modes of learning for the mhvi child than for the child who has visual impairment without other educationally significant handicapping conditions. Support was given for the necessity of teaching the use of other sense modalities.

Other than indicating that materials are usually similar to materials used with the young visually impaired

child, literature says little about instructional materials. A need for more listening materials and high-interest materials was expressed.

Communication development was considered an especially significant area of concern. It was felt that much of the progress of the child and attitudes toward him were dependent upon the development of meaningful communication skills.

There were differing opinions as to whether the mhvi child requires educational methods specifically developed to meet his needs or may be adequately served by modified procedures. The multi-handicapped child was described as functioning best with individualized instruction and as relating poorly in a group situation.

Four underlying principles for determining programming for mhvi children are:

1. Adequate educational resources need to be provided as early in the child's life as possible.

2. It is necessary to involve the entire family in the educational process if maximum benefits are to be realized.

3. Widespread use of community resources is advocated.

4. Work with mhvi children should be approached positively and in a manner which anticipates continual improvement in services, as well as the child's own

ability to respond to these.

Gall has summarized the major points made in the literature concerning the mhvi child:

> The problems, consequently, are to discover and identify the MHB at the earliest possible time; to test them as adequately as possible; and to place them in suitable school settings where they can best be trained. Simultaneously, someone must explain them to themselves, to their families (including siblings and other relatives) through skillful counseling, so as to provide them throughout life with rich physical, social, mental, sensory, and communication experiences in a warm, wholesome, and secure environment of training and education until they are capable of independent living.[187]

The literature also gives a limited reporting of details of techniques and philosophy used in special programs. There is a limited amount of descriptive research on the mhvi child. Empirical research is even more rare.

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[187]Gall, "Needed Research," pp. 450-451.

Chapter 3

METHODOLOGY AND PROCEDURE

Supporting Agency

The Instructional Materials Reference Center of the American Printing House for the Blind, Louisville, Kentucky, was the supporting agency for the basic study of the mhvi child. Available resources included a library of the major literature and research materials on the visually handicapped person, personnel qualified in work with the visually handicapped and in research techniques, and an established system of communication with other agencies serving the visually handicapped persons in this country. The basic concern of the supporting agency was with definition of the educational needs of the mhvi child as a basis for developing instructional materials.

Library Research

The first step in the study was to develop a comprehensive bibliography concerning the mhvi child. This was foundational in delineating the gaps in research and in formulating the proposed study. Because much of what is written about the mhvi child includes only prevalence

studies and broad generalizations,[1] questions of educational goals and methods remained unanswered. A review of literature and published research failed to produce satisfactory answers to these questions:

1. What are the most significant educational tasks or skills for mhvi children?

2. What problems hinder the learning process?

3. What types of instructional materials are most beneficial?

4. What are the most significant modes of learning?

5. What adaptations in the structure of the educational programs are needed?

6. What educational provisions are being made?

7. What differences are there between the educational needs of the mhvi child and the child with no other major handicapping condition besides visual impairment?

These are questions which must be asked in outlining any aspect of an educational endeavor with the mhvi child.

Because there has been recent expansion of interest in the problems of the mhvi person[2] and because of the

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[1]Randall K. Harley, "A Review of Recent Literature on the Multi-Handicapped Child and Related Areas," Proceedings of the American Association of Instructors of the Blind, 48:44, June, 1966.

[2]Carson Y. Nolan and S. C. Ashcroft, "The Visually Handicapped," Review of Educational Research, 39:66,

development of new programs, it seemed advisable to utilize a survey method to investigate current evolvement. On the basis of reports of inadequate instruments for individual diagnosis and assessment of the mhvi child,[3,4] it was concluded that a questionnaire should be sent to persons working in educational programs for the mhvi children. This procedure would allow a comparison of the statements of a number of persons who are working directly with the children. Gall asserted that educational research in the area of the mhvi child will have its major thrust in the classroom with the research professionals working with the teacher.[5] She stressed the need for dependable findings in existing programs and ongoing projects.[6] This gave additional support for going directly to the persons with the most first-hand involvement in educational programs for these children. The questionnaire was chosen as

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February, 1969.

[3]M. S. C. Brown, "The Multiple Handicapped Blind Child," Proceedings of the American Association of Instructors of the Blind, 47:23, June, 1964.

[4]James M. Wolf, "Multiple Disabilities: An Old Problem with a New Challenge," New Outlook for the Blind, 59:268, October, 1965.

[5]Elena D. Gall, "Needed Research in the Field of Services for the Multiple-Handicapped Blind," Blindness Research: The Expanding Frontiers, eds. Maxwell H. Goldberg and John R. Swinton (University Park: Pennsylvania State University Press, 1969), p. 450.

[6]Ibid., p. 455.

particularly valuable since it could be mailed to a large number of organizations because personal contacts would not be feasible or possible.

Determination of the Population to be Surveyed

The federal government provides funds to help meet the educational needs of those visually handicapped children who are registered with the American Printing House for the Blind on January first of each year. Trustees responsible for the disbursement of these funds are located in each state. A letter was sent to the each of the fifty-three area trustees requesting him to identify educational programs in his area which are presently serving mhvi children. A follow-up letter was mailed to each three weeks after the mailing of the first letter. A copy of these letters may be found in Appendix A.

Replies were received from forty-eight, or 92 percent, of the fifty-three trustees. The list obtained through these letters was checked against the list of organizations for the visually handicapped available at the American Printing House for the Blind, the Directory of Agencies Serving the Visually Handicapped in the United States, and the Directory for Exceptional Children. This comparison provided a method of refinement of addresses and a check for any obvious omissions of organizations with well-established programs designed to meet the educational

needs of mhvi children. A list of 293 organizations serving the mhvi child was compiled by this process. This list did not include all programs for mhvi children, but it did provide for a widespread geographical representation within the United States. It was recognized that some of these organizations would not be currently serving the children defined for this study, but it appeared best to contact all those organizations which were suggested. Rather than doing this through two separate mailings, the questionnaire was designed to permit this information to be obtained without requiring the completion of the entire form.

Construction of the Questionnaire

A review of literature and research indicated gaps in the information concerning educationally significant characteristics of the mhvi child and the basic organizational structure of educational facilities currently serving this child. Several surveys dealing with the mhvi child, reports dealing with special programs for this child, and reviews of research were used in determining aspects to be included in the draft. The first draft of the questionnaire included information:

1. Of a general nature concerning the specific organization responding

2. On educationally significant characteristics of the mhvi child

3. On the structure of current educational programs for mhvi children.

Some of the questions posed dealt with more than one of the above points but the following items were outlined in the initial draft of the questionnaire:

1. Organizational structure of the program
2. Age distribution of the children
3. Factors used in determining grouping procedures
4. Number of children needing individual instruction most of the time
5. Educational tasks held to be most significant
6. Outstanding problems which interfered with the learning process
7. Learning modes used
8. Numbers of verbal and non-verbal children
9. Percentage of time spent in various instructional areas
10. Number of children who had applied but were not admitted during the past twelve months period
11. Indications of types of additional handicapping conditions
12. Types of instructional materials needed and types of materials held to be most beneficial.

A closed-end question was formulated if sufficient information was available for classification of the possible answers. In a number of cases an open-end question

was felt to be most conducive to encouraging a maximum of usable information with a minimum of prompted responses. A criterion for evaluation, as proposed by Good and Scates, was used as a guide in the evaluation of both specific questions and the questionnaire as a whole.[7] In view of the fact that there is a shortage of personnel working with mhvi children, the questionnaire was designed to emphasize brevity and maximize the number of returns.

Consideration of the problems of taxonomy in special education has grown during recent years. A number of persons have been dealing with studies that are of value in studying multi-handicapped children.[8,9,10,11,12] These

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[7]Carter V. Good and Douglas E. Scates, Methods of Research (New York: Appleton-Century-Crofts, Inc., 1954), pp. 615-616.

[8]Thomas E. Jordan, "Development of a Taxonomy for Special Education," Exceptional Children, 28:7-12, September, 1961.

[9]Samuel Levine, "A Proposed Conceptual Framework for Special Education," Exceptional Children, 28:83-90, October, 1961.

[10]Herbert C. Quay, "The Facets of Educational Exceptionality: A Conceptual Framework for Assessment, Grouping, and Instruction," Exceptional Children, 35:25-32, September, 1968.

[11]Maynard C. Reynolds, "A Framework for Considering Some Issues in Special Education," Exceptional Children, 28:367-370, March, 1962.

[12]Godfrey Daniel Stevens, Taxonomy in Special Education for Children with Body Disorders (Pittsburgh, Pennsylvania: University of Pittsburgh, 1962), pp. 55-59.

studies were useful in evaluating the structure of questions and the summarization of returns.

Two major subsequent revisions of the form were made on the basis of evaluation by a number of qualified persons conversant in the field encompassing the multi-handicapped child and educational research methodology, and on the basis of visits to five organizations serving this child.[13] Included in these programs were: Kentucky School for the Blind Program for Multi-Handicapped Blind, Louisville Cerebral Palsy School, Southern Baptist Theological Seminary Nursery School and Kindergarten, Frankfort State Hospital and School, and George Peabody College Program for Multi-Handicapped Children. This selected sampling of programs was representative of the different types of organizations involved in the study; these were chosen for their proximity. Three of the above organizations were requested to complete the questionnaire before

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[13]An expression of appreciation for the evaluation of the research instruments is due to Carson Y. Nolan, Carl Lappin, Joan Bott, and Amie Dennison of the American Printing House for the Blind; Ron Cyphers of the Southeast Regional Center for the Deaf-Blind; Sister Mary Georgeann of the Louisville Cerebral Palsy School; Nancy Steele of Florida State University; Betty Wommack of the Kentucky School for the Blind; Virginia I. Smith, Carlene Dallinga, and Verna Hart of the George Peabody College Program for Multi-Handicapped Children; Carol Halliday of the Lexington, Kentucky Comprehensive Care Center; and Lucien Coleman of the Southern Baptist Theological Seminary.

a visit was made and then a period of time was spent in evaluating the responses during each visit. The Instructional Supervisor in another program gave time for a personal interview after the interviewer had made a thorough observation of the facilities and program. In this interview, each item of the questionnaire was discussed as it was completed.

In order to facilitate responses being made by the person most qualified to do so, it was necessary to divide the questionnaire into two sections. Section A was to be completed by a program administrator or instructional supervisor. Section B was to be completed by the person working directly with the children most of the time.

A number of questionnaire formats were studied in the process of attempting to develop a format that was conducive to correct and simplified responding, editing, coding, and analysis of data.

The final stage of refinement of the questionnaire involved sending the questionnaire to a sample of eleven organizations with programs for mhvi children. The questionnaire subsequently required only a few minor revisions. A copy of this questionnaire may be found in Appendix B.

Distribution of the Questionnaire

The questionnaire was then mailed to the 293 organizations with programs which would possibly serve mhvi children. Stamped return evelopes were enclosed. Individually typed cover letters, urging response and giving directions for the respondents, were enclosed.

The Follow-up Phase

Four weeks after the initial mailing of the questionnaire a personal letter was mailed to each person who had not returned the form. A brief response form, which would allow the person to indicate the need for additional forms, the date anticipated for completion, and additional comments concerning the survey, was included. A stamped return envelope was again enclosed.

Members of the Instructional Materials Reference Center, the Editorial Department, and the Educational Research Department of the American Printing House for the Blind were informed concerning the survey. This was for the purpose of facilitating their replies to questions which might be posed when they visited various organizations involved in the study. Additional communication was made through letters and phone calls.

Eight weeks after the initial mailing of the questionnaire, a shortened form was mailed. Included were a new cover letter and a stamped return envelope. This

form was phrased so as to cover the items most essential to the study. Editing of the long form was helpful in determining the content of the abbreviated questionnaire. The shortened form was mailed to the organizations from which no response had been received. In future references the two questionnaire forms will be designated as the long form and the shortened form. A copy of the shortened form may be found in Appendix C.

Table 2 outlines response to the questionnaire mailing. Replies were received from 258, or 88 percent, of those organizations contacted. Replies from ninety-six organizations indicated that their programs did not meet the criteria for the study. Reasons for this are given in Table 3. Correspondence from three organizations stated that the personnel did not feel that they could participate in the study but that their organizations had active programs for mhvi children. Of the 159 questionnaires received, 135 were long forms and 24 were the shortened forms. Questionnaires were returned by 81 percent of the 197 programs which were not disqualified for this study. Three additional organizations responded too late to be included in the data analysis.

Table 2

Distribution and Response from Questionnaire Mailing

State	Number mailed	Active programs reported	Not meeting criteria for study	No response received
Alabama	2	2		
Alaska	5		5	
Arizona	2	2		
Arkansas	3	2	1	
California	33	22	8	3
Colorado	2	2		
Connecticut	2	2		
Delaware	1	1		
Florida	18	13	4	1
Georgia	12	5	6	1
Hawaii	3	3		
Idaho	2	2		
Illinois	7	3	3	1
Indiana	2	2		
Iowa	5	3[a]	2	
Kansas	19	12	6	1
Kentucky	3	2	1	
Louisiana	3	2	1	

[a]Indicates an organization which did not participate in study.

Table 2 (continued)

State	Number mailed	Active programs reported	Not meeting criteria for study	No response received
Maine	5	4	1	
Maryland	6	3	1	2
Massachusetts	3	2[a]		1
Michigan	16	8	7	1
Minnesota	1	1		
Mississippi	5	1	3	1
Missouri	32	6	17	9
Montana	1	1		
Nebraska	1		1	
Nevada	1	1		
New Hampshire	1		1	
New Jersey	4	3		1
New Mexico	1			1
New York	16	7	8	1
North Carolina	3	1	2	
North Dakota	1		1	
Ohio	1	1		
Oklahoma	4	3		1
Oregon	5	3	2	

[a]Indicates an organization which did not participate in study.

Table 2 (continued)

State	Number mailed	Active programs reported	Not meeting criteria for study	No response received
Pennsylvania	9	7		2
Rhode Island				
South Carolina	5	3	2	
South Dakota	2	1	1	
Tennessee	18	9	7	2
Texas	5	3		2
Utah	2	2		
Vermont	1	1		
Virginia	4	3[a]	1	
Washington	5	4	1	
West Virginia	2	1	1	
Wisconsin	2	2		
Wyoming	1			1
District of Columbia	2	1		1
Puerto Rico	3		1	2
Canal Zone	1		1	
Total	293	162	96	35

[a]Indicates an organization which did not participate in study.

Table 3

Reasons Given for Not Completing Questionnaire

Reason	Number
Not presently serving mhvi children	51
Program is new or just recently established	3
Students are integrated into regular program with little or no special provision made for mhvi children	17
Auxiliary service only such as library, consultant or tutor	7
Serving mhvi but not with a basically educational program	5
Program has been combined with another agency's program or there has been a total reorganization of program	3
Duplication in mailing list	8
Mail was undeliverable because no forwarding address was left	2
Total	96

Analysis of Results

The completed questionnaires were checked by two processes. Each questionnaire was read entirely when it was received. When a substantial number of returns had been received, responses to specific questions were compared. When necessary, written requests for clarification and additional information were made.

Comparison of the similarity of the responses on the long and shortened forms was obtained through using a chi-square test.

A list of categories was developed from a survey of the responses to open-end questions. Five qualified persons (selected because of their knowledge of research techniques and experience with mhvi children) assisted in evaluating these categories. Code numbers were assigned to the category listings and each questionnaire was then coded. These codes were punched into data cards. The cards were verified. Data processing equipment was utilized in the tabulation of the coded responses. The data was then reported in tabular and anecdotal forms.

Analysis of Organizations from Which No Response Was Received

An analysis was made of the thirty-eight organizations from which no reply to the questionnaire was received. Only six of these were primarily concerned with the education of visually handicapped children. Nine were

programs for the mentally retarded. Seven were programs designed for children with cerebral palsy. Seven organizations were local departments of special education. The remaining nine contacts were made with two state preschool workers, a private tutor, two organizations primarily serving other than visually impaired children and four organizations for which there was no information as to their type of service.

There is a good probability that a number of the above organizations would have indicated that no special provision was being made for mhvi. Replies were received from 255 organizations of which 38 percent reported they were not qualified for this study. If the same ratio held true for the thirty-eight organizations who did not make a reply, at least fourteen organizations would not be qualified for this study.

A breakdown of the organizations by type indicates the probability that the number of programs not meeting the requirements of this study would be even greater for these thirty-eight organizations than for those who did reply. Fifty-three percent of the organizations serving children with cerebral palsy from whom responses were received indicated that they were not prepared to serve visually handicapped children. Of the replies from local special education departments, 41 percent stated they were not presently serving mhvi children. Therefore,

organizations who might have participated but did not reply would probably equal only twenty or fewer.

Chapter 4

ANALYSIS OF THE QUESTIONNAIRE RETURNS

More than four hundred persons from 159 organizations participated in supplying information concerning 3,443 mhvi children. The data collected in this study were analyzed according to the following divisions:

1. Information concerning the organizations participating in this study

2. Data reported about mhvi children being served by these organizations

3. Information on the educational needs of the mhvi children reported in this study.

In cases in which there were significant differences between the responses on the long and the shortened forms, the data were presented separately. The two forms were compared with the use of a chi-square test.

This chapter constitutes a nonevaluative analysis of the data both in tabular and in textual forms. An evaluative discussion of these data follows in Chapter 5.

INFORMATION CONCERNING THE ORGANIZATIONS PARTICIPATING IN THIS STUDY

Titles of Persons Providing General Information on Programs

Section A of the questionnaire was completed by 169 persons, while section B had 337 respondents participating. Of the 135 persons completing the long form and identifying their position titles, forty-five (or 33 percent) were teachers or teacher consultants; twenty-six (or 19 percent) were directors; eighteen (or 13 percent) were school principals; nine (or 7 percent) were program coordinators; fourteen (or 10 percent) were supervisors; and nine (or 7 percent) were superintendents. An additional fourteen persons (or 10 percent) indicated a variety of positions, including such titles as psychometrist and special therapist. This information is presented in Table 4.

Types of Organizations Participating in This Study

As Table 5 reflects, 45 percent of the organizations participating in the study had public day programs. The state residential organizations represented 35 percent. Fourteen percent were private residential, and 6 percent were private day.

Of the organizations reported, 59 percent were designed chiefly to serve children with visual impairment. Fourteen percent were geared largely for education of the

Table 5

Frequency of Types of Organizations Participating in Study

Handicapped child for which service is designed primarily	Type of organization									
	State residential		Public day		Private residential		Private day		Total organizations	
	N	%	N	%	N	%	N	%	N	%
Visually Impaired	32	20	47	30	9	6	6	4	94	59
Mentally Retarded	18	11	3	2	1	1			22	14
Deaf	1	1	1	1					2	1
Deaf-Blind	2	1							2	1
Multi-Handicapped			6	4	3	2			9	6
Multi-Handicapped, Visually Impaired					3	2	3	2	6	4
Single Handicaps other than Above	2	1	2	1	5	3	1	1	10	6
A Combination of Handicaps other than Above			12	8	2	1			14	9
Total	55	35	71	45	23	14	10	6	159	100

Table 4

Titles of Persons Providing General Information on Programs

Title	N	%
Teacher or Teacher Consultant	45	33
Program Director, Executive Director	26	19
Principal	18	13
Coordinator	9	7
Instructional Supervisor, Head Teacher or Supervising Teacher	14	10
Superintendent	9	7
Other	14	10
Total	135	100

The rounding process results in a discrepancy in percentages.

mentally retarded child. The remaining 27 percent were designed mainly to serve children with a variety of other handicapping conditions. The state residential and public day programs reported in this study were designed primarily for working with visually impaired, mentally retarded, or deaf-blind children. Of the thirty-three privately supported organizations, seventeen were structured principally to meet the needs of multi-handicapped children or children with handicapping conditions other than visual impairment, mental retardation, or hearing losses.

Distribution of MHVI Children According to Types of Organizations

Table 6 indicates that 2,232 (65 percent) of the mhvi children reported were in organizations designed primarily for children with visual impairment. Institutions for the mentally retarded reported 706 mhvi children (20 percent). Organizations concerned especially with the education of mhvi children served 192 (6 percent) of the mhvi children reported in this study.

More mhvi children (2,010 or 58 percent) were located in the state residential schools than in the public day, private residential, and private day organizations combined.

Tables 7 and 8 indicate the differences in the number of mhvi children as reported on the long and

Table 6

Distribution of MHVI Children According to Types of Organizations Participating in Study

Handicapped child for which service is designed primarily	Types of organizations									
	State residential		Public day		Private residential		Private day		Total children	
	N	%	N	%	N	%	N	%	N	%
Visually Impaired	1,244	36	565	16	161	5	262	8	2,232	65
Mentally Retarded	687	20	17		2				706	21
Deaf	1		4						5	
Deaf-Blind	70	2							70	2
Multi-Handicapped			31	1	20	1			51	1
Multi-Handicapped Visually Impaired					71	2	121	4	192	6
Single Handicaps other than Above	8		3		13		6		30	1
A Combination of Handicaps other than Above			142	4	15				157	5
Total	2,010	58	762	22	282	8	389	11	3,443	100

Rounding process results in a discrepancy in percentages.

Table 7

Distribution of MHVI Children According to Primary Type of Handicapped Child Served by Organization

Handicapped child for which service is designed primarily	Long form		Shortened form		Total	
	N	%	N	%	N	%
Visually Impaired	1,908	55	324	9	2,232	65
Mentally Retarded	414	12	292	8	706	21
Deaf	5				5	
Deaf-Blind	70	2			70	2
Multi-Handicapped	51	1			51	1
Multi-Handicapped Visually Impaired	192	6			192	6
Single Handicaps other than Above	27	1	3		30	1
A Combination of Handicaps other than Above	116	3	41	1	157	5
Total	2,783	81	660	19	3,443	100

Table 8

Distribution of Children According to Types of Organizations

Type of organization	Long form		Shortened form		Total	
	N	%	N	%	N	%
State Residential	1,578	46	432	13	2,010	58
Public Day	608	18	154	4	762	22
Private Day	260	8	22	1	282	8
Private Residential	337	10	52	2	389	11
Total	2,783	81	660	19	3,443	100

shortened questionnaire forms. A chi-square test showed these differences significant at the .001 level. The shortened form was more heavily weighted than the long form with responses from organizations serving mentally retarded children and with replies from state residential organizations. On the shortened form, no replies were received from organizations serving mainly deaf, deaf-blind, multi-handicapped and mhvi children.

Primary Type of Service

Education was designated by 112 (70 percent) organizations as the principal type of service provided (see Table 9). Forty-three organizations (27 percent) considered services in addition to education a major aspect of their work. Four organizations participating in the study did not consider education as their primary goal.

Period of the Year in Which Program is in Operation

An analysis of Table 10 shows that ninety-one organizations (57 percent) had programs during the regular school term only. Seventeen others (11 percent) had special summer programs in addition to those of the regular school term. Forty-seven (30 percent) of the organizations were in operation for the entire year; three (2 percent) closed for one month only. One organization was in operation during the summer only.

Table 9

Frequency of Organizations According to Primary Type of Service Provided

Type of service	N	%
Evaluation and Diagnosis		
Treatment or Therapy	1	1
Education	112	70
All of Above	19	12
Education plus Evaluation and Diagnosis	16	10
Education plus Therapy and Treatment	8	5
Resource or Auxiliary Service	3	2
Total	159	100

Table 10

Reported Period of the Year in Which Program is in Operation

Period of year	N	%
Entire Year	47	30
Summer Only	1	1
Regular School Term Only	91	57
Regular School Term Plus Special Summer Session	17	11
Other	3	2
Total	159	100

Organizational Designs of the Reported Programs for MHVI Children

The types of organizational designs for the programs reported in this study are described in Table 11. MHVI children were integrated with other handicapped or non-handicapped children in seventy organizations (44 percent). Twenty-six organizations (16 percent) had, in addition to an integrated program, special classes for mhvi children. In twenty-four organizations (15 percent) most of these children were provided for in special-class situations. The programs of twelve schools (8 percent) were designed solely for the mhvi child; and, in eight others (5 percent), there were completely separate units. The remaining thirteen programs (9 percent) had either a two-track or three-track program using a combination of separate units, classes, or integration. Six organizations (4 percent) worked with mhvi students on an individualized basis only.

Distribution of Programs and Children According to the Number of MHVI Being Served by the Organizations Reported

There was no significant difference between the long and shortened form for the distribution of programs classified according to the number of mhvi being served. There were significant differences at the .001 level between the two forms for the distribution of children

Table 11

Reported Organizational Designs of Programs Serving MHVI Children

Type of design	N	%
Entire School for MHVI	12	8
A Separate Unit for MHVI	8	5
Special Classes for MHVI	24	15
MHVI Integrated with Other Children	70	44
Two-Track System: Special Classes and Integration	26	16
Two-Track System: Separate Unit and Special Classes	4	3
Two-Track System: Separate Unit and Integration	4	3
Individualized Work Only	6	4
Other	5	3
Total	159	100

classified according to the size of the program for mhvi. Sixty-eight percent (448) of the mhvi children reported on the shortened form were in programs serving more than fifty mhvi children. Sixty-eight percent (1,879) of the children reported on the long form were in programs with fifty or fewer mhvi children.

As can be seen in Table 12, sixty-nine organizations (44 percent) served from 1-10 mhvi children. Thirty organizations (19 percent) had from 11-20, and twenty-two organizations (14 percent) served 21-30 mhvi children. The largest number of mhvi children (571) was found in organizations serving 21-30 mhvi children. Nine organizations (6 percent) fell in the category of 31-40 mhvi children. There were ten organizations (6 percent) having 41-50 mhvi children. The remaining eighteen organizations (11 percent) had more than fifty children in each. One organization did not report its total number of mhvi children.

In summary, 140 organizations (89 percent) had fifty mhvi children or fewer in their programs. Eighteen organizations (11 percent) were serving more than fifty mhvi children. The majority of the children (2,091 or 61 percent) were found in programs of fifty or fewer mhvi children. Only 1,352 (39 percent) were in programs of more than fifty.

Table 12

Frequency Distribution of Programs and MHVI Children According to Number of MHVI Being Served by Organization

No. of mhvi children	Programs		Number of children					
			Long form		Shortened form		Total	
	N	%	N	%	N	%	N	%
1 - 10	69	44	261	8	45	1	306	9
11 - 20	30	19	353	10	95	3	448	13
21 - 30	22	14	541	16	30	1	571	17
31 - 40	9	6	324	9			324	9
41 - 50	10	6	400	12	42	1	442	13
51 - 60	5	3	159	5	111	3	270	8
61 - 70	5	3	201	6	127	4	328	10
71 - 80								
81 - 90	4	3	348	10			348	10
91 - 100	2	1	91	3	100	3	191	6
over 100	2	1	105	3	110	3	215	6
Total	158	100	2,783	81	660	19	3,443	100

One organization did not report the total number of children.

Factors Reported as Determinant in Grouping MHVI Children

Each respondent indicated how the mhvi children were grouped. A summary of the determinant factors reported is presented in Table 13. General intellectual functioning was the factor most frequently designated as determining grouping. Second was the need for integration with other students. Other factors frequently mentioned (more than thirty times each) were age; the need for evaluation, readiness, or preschool training; special handicapping conditions; need for individual attention or programming; and the need for the flexibility of broadly graded groups. There was a total of 371 responses; each organization was asked to give a maximum of four responses.

There was a significant difference at the .01 level between the two forms used in the survey. The respondents to the shortened form placed a great deal more emphasis on grouping the child according to social level than did respondents to the long form. Broadly graded groupings and special handicapping conditions were more often indicated in the long form responses than in the shortened form.

Numbers of MHVI Children Reported as Being in a Subject-Oriented Curriculum

Reports were made on 2,738 mhvi children regarding the use of an academic, subject-oriented curriculum. Of this number, 1,224 mhvi children (45 percent) were in a

Table 13

Factors Reported as Determinant in Grouping MHVI Children for Educational Programming

Factors	Programs reported		
	Long form	Shortened form	Total
General Intellectual Functioning	38	19	57
Need for Integration with Other Students	34	14	48
Need for Evaluation, Readiness or Preschool Training	31	7	38
Special Handicapping Conditions	33	4	37
Age	26	10	36
Need for Individual Attention or Programming	23	12	35
Need for Flexibility of Broadly Graded Groups	30	1	31
Need for Specific Subject or Skills Area Development	16	4	20
Level of Social Maturity	2	10	12
Need for Flexibility of Nongraded Groups	11		11
Prevocational or Vocational Training	11		11
Mode of Reading or Vision	6	3	9
Size of Pupil	3	5	8
Teacher-Student Ratio	3	5	8
Activity Level of Child	1	1	2
Other	8		8
Total	276	95	371

subject-oriented curriculum (see Table 14). This means that 55 percent of the children reported could not be so classified.

The smallest percentage (4 percent) of mhvi children in subject-oriented curriculum represented those located in state residential institutions designed primarily to serve mentally retarded persons. MHVI children in organizations chiefly for children with visual impairment were more consistently placed in a subject-oriented curriculum. This was true except for private day programs.

Numbers of MHVI Children Not Admitted by Reporting Organizations During a Twelve Month Period

Each respondent was asked to tell how many children had been in contact with the program but, for reasons other than age, could not be admitted during the past twelve months. This information is described in Table 15. A total of 663 (an average of 5.77 per organization) were turned away from the 115 organizations responding to this question. The public day organizations more consistently denied admission to fewer children (an average of 2.3 children per organization). The seven private residential organizations participating in the study turned away an average of 14.3 children during a twelve month period. This was the highest number denied admission.

Table 14

Numbers of MHVI Children Reported as Being in a Subject-Oriented Curriculum

Type of organization		Total no. mhvi children reported	MHVI children reported in sub. curr.	
			N	%
State Residential	VI	1,165	703	60
	MR	391	13	4
	Other	9	1	11
Public Day	VI	442	251	57
	MR	14	4	29
	Other	136	29	21
Private Day	VI	197	15	8
	MR	2	2	100
	Other	45	17	38
Private Residential	VI	331	189	57
	MR			
	Other	6		
Total		2,738[a]	1,224	45

VI--Designed primarily to serve children with visual impairments.
MR--Designed primarily to serve children with mental retardation.
Other--Designed primarily to serve children with handicapping conditions other than VI or MR.

[a]Ten organizations with a total of 46 mhvi children did not respond to this question.

Table 15

Numbers of MHVI Children Not Admitted by Reporting Organizations During Past Twelve Months

Type of organization		No. of programs reported	No. of children not admitted	Average per program
State Residential	VI	27	267	9.89
	MR	10	112	11.20
	Other	2	1	.50
Public Day	VI	35	93	2.66
	MR	2	2	1.00
	Other	14	22	1.57
Private Day	VI	9	49	5.44
	MR	1	2	2.00
	Other	8	15	1.88
Private Residential	VI	6	90	15.00
	MR			
	Other	1	10	10.00
Total		115	663	5.77

Categories or Organizations
VI--Designed primarily to serve children with visual impairments.
MR--Designed primarily to serve children with mental retardation.
Other--Designed primarily to serve children with handicapping conditions other than VI or MR.

DATA REPORTED ABOUT MHVI CHILDREN BEING SERVED BY THE ORGANIZATIONS PARTICIPATING IN THIS STUDY

Frequency Distribution of Types of Handicaps Reported by Various Organizations

An average of 3.28 handicaps per child was indicated for the mhvi children in the organizations participating in this study (see Table 16). The highest averages (4.71 and 4.15) were designated for children in public day and state residential organizations designed primarily to serve mentally retarded children. The lowest average (2.00) was indicated for mhvi children in private residential organizations geared to serve principally a variety of children with handicapping conditions other than visual impairment and mental retardation. Low averages (2.93 and 2.96) were also recorded for organizations designed mainly to serve visually impaired children in public day and in state residential programs.

For the children reported in this study, the handicapping conditions listed in order of most frequent occurrence were:

1. Visual Impairment
2. Mental Retardation
3. Speech Defect
4. Emotional Disturbance
5. Brain Damage

Table 16

Frequency Distribution of Types of Handicaps Reported by Various Programs

Type of handicap	State residential			Public day			Private day			Private residential			Total
	VI	MR	Other	VI	MR	Other	VI	MR	Other	VI	MR	Other	
Mental Retardation	642	388	6	231	12	100	157	2	23	259			1,820
Hearing Impairment	178	54	1	72	1	44	54		11	43			458
Cerebral Palsy	167	75	4	50		11	23		11	30		6	277
Cardiac Disturbance	26	21		16	1	19	45		5	19			152
Speech Defect	380	206	3	116	10	34	102	2	13	92			958
Epilepsy	90	101		32		4	36		8	49			320
Brain Damage	190	75	3	153	12	31	53		24	88			629
Orthodontic Defect	117	70	1	29	5	6	13		3	52			296
Orthopedic Defect	127	87	4	55	4	15	24		10	49			375
Cosmetic Defect	99	14		16	4	2	20			15			170
Emotional Disturbance	349	102	6	81	3	32	73		8	115			769
Other	35	12		19		4	2		6	3			81
Total	2,300	1,205	28	870	52	302	602	4	122	814		6	6,305
Av. No. handicaps per child (Including VI)	2.90	4.15	4.11	2.93	4.71	3.22	3.83	3.00	3.71	3.46		2.00	3.28

Number of mhvi children reported--2,761
Categories
VI--Designed primarily to serve children with visual impairments.
MR--Designed primarily to serve children with mental retardation.
Other--Designed primarily to serve children with handicapping conditions other than VI or MR.

6. Hearing Impairment
7. Orthopedic Defect
8. Epilepsy
9. Orthodontic Defect
10. Cerebral Palsy
11. Cosmetic Defect
12. Cardiac Disturbance
13. Other Handicapping Conditions

Distribution of MHVI Children According to Visual Acuity

Table 17 presents the distribution of mhvi children according to visual acuity. Of the children considered totally blind (1,027), 877 were blind before age three. The largest number of children (1,198) were those considered as legally blind, having a visual acuity of 20/200 or less. More than one third of the children who had a visual acuity of greater than 20/200 were in public day programs. A severe loss of peripheral vision was indicated for 170 mhvi children. There was no accurate knowledge of the vision of 241 children. The state residential schools serve a larger percentage of legally blind children than do the public day programs.

Distribution of MHVI Children According to Age

Forty-nine percent (1,608) of the mhvi children reported were thirteen or older. Organizations reported

Table 17

Distribution of MHVI Children According to Visual Acuity

Degree of vision	Type of organization												Total children
	State residential			Public day			Private day			Private residential			
	VI	MR	O	VI	MR	O	VI	MR	O	VI	MR	O	
Totally Blind	488	131	3	73	1	53	85		15	172		6	1,027
Blind before Age 3	450	75	2	64	1	46	82		15	136		6	877
Visual Acuity of 20/200 or less	557	129		229	2	35	98		16	132			1,198
Visual Acuity Between 20/200 and 20/20	92	56		110	2	23	13		7	4			307
Severe Loss of "Field" (Peripheral Vision)	106	28		21	2	9	1	1	1	1			170
Degree of Vision Unknown	52	105	5	19		26	17	1	8	8			241

Number of children reported--2,776
VI--Designed primarily to serve children with visual impairments.
MR--Designed primarily to serve children with mental retardation.
Other--Designed primarily to serve children with handicapping conditions other than VI or MR.

fewer children in the younger age groupings with only 375 children (12 percent) in the category which is generally considered as preschool (0-5). This information is summarized in Table 18.

Mode of Communication

The mode of communication was indicated for 3,361 mhvi children. Seventy-six percent (2,553) had demonstrated the ability to use language. Twenty-four percent (808) children were considered as non-verbal and did not use language as a means of communication. Table 19 indicates this information.

Reported Frequency of Learning Modes Used by MHVI Children

Table 20 presents the learning modes used by 3,191 mhvi children. Twenty-eight percent (897) of the mhvi children used braille. Twenty-nine percent (931) used large or clear type print. Nearly 4 percent (115) were able to use regular print reading materials. Twenty-seven percent (864) used listening materials only. The respondents indicated that 12 percent (384) of the mhvi children could use none of the above modes.

MHVI Children Requiring Individualized Instruction Most of the Time

Respondents indicated that the majority (76 percent) of mhvi children with whom they worked required

Table 18

Frequency Distribution of MHVI Children According to Age

Age range	N	%
0 - 5	375	12
6 - 9	628	19
10 - 12	646	20
13 - 21	1,608	49
Total	3,247	100

Table 19

Reported Frequency of Communication Mode Used by MHVI Children

Mode	N	%
Non-verbal	808	24
Verbal	2,553	76
Total	3,361	100

Table 20

Reported Frequency of Learning Mode Used by MHVI Children

Mode	N	%
Braille	897	28
Large or Clear Type Print	931	29
Regular Print	115	4
Listening Materials Only	864	27
None of These	384	12
Total	3,191	100

individualized instruction most of the time. There was a significant difference at the .001 level between the responses on the shortened and the long forms of the questionnaire. A higher percentage (79 percent as compared to 61 percent) of mhvi children was reported on the long form as requiring individualized instruction most of the time. A total of 2,591 children out of 3,431 reported on both forms required this type of attention. (See Table 21).

Problems Which Most Hinder Learning by MHVI Children

Each person responding was requested to indicate the three problems which most hindered learning by mhvi

Table 21

MHVI Children Reported as Requiring Individualized Instruction Most of the Time

	Long form		Shortened form		Total	
	N	%	N	%	N	%
Number Children Requiring Individualized Instruction Most of the Time	2,211	64	380	11	2,591	76
Total Number MHVI Children Reported	2,812	82	619	18	3,431[a]	100

[a]The total number of children varies slightly between Section A and Section B.

children. These are summarized in Table 22. The seven most frequently mentioned problems are listed below in order of the number of times each was indicated:

1. Non-Attending Behavior
2. Emotional Disturbance
3. Experiential Deprivation
4. Communication and Language Problems
5. Inability Properly to Process Information and Stimuli
6. Mental Retardation
7. Withdrawal or Non-Assertive Behavior.

There was a significant difference at the .001 level between the long form and the shortened form. Mental retardation was the problem most often indicated on the shortened form. Withdrawal or non-assertive behavior was mentioned only once by respondents on the shortened form. Need for individual instruction was more frequently indicated as one of the outstanding problems in the replies to the shortened form. Persons responding to the long form indicated more often than persons using the short form the following as key problems:

1. Poor orientation and mobility skills
2. Poor coordination and motor skills difficulty.

Table 23 indicates a ranking of the responses to the two forms.

Table 22

Reported Frequency of Occurrence of Problems Which Most Hinder Learning by MHVI Children

Problems	Responses		
	Long form	Shortened form	Total
Non-Attending Behavior	91	7	98
Emotional Disturbance	83	8	91
Experiential Deprivation	77	7	84
Communication and Language Problems	68	13	81
Inability Properly to Process Information and Stimuli	69	12	81
Mental Retardation	60	18	78
Withdrawal or Non-Assertive Behavior	70	1	71
Lack of Educational Provisions	45	5	50
Poor Coordination and Motor Skills Difficulty	46		46
Special Physical Impairment Other Than Visual Impairment	31	5	36
Adjustment to and Poor Use of Vision	30	2	32
Unacceptable Social Skills	29	1	30
Poor Orientation and Mobility	26	2	28
Need for Individual Instruction or Attention	11	12	23
Lack of Self-Help and Daily-Living Skills	8	4	12
Other	18	1	19
Total	762	98	860

Each respondent was requested to indicate three problems.

There were 298 respondents using the long form and 33 using the shortened form.

Table 23

Ranking of the Frequency of Reported Occurrence of Problems Which Most Hinder Learning by MHVI Children

Problems	Rank		
	Long form	Shortened form	Total
Non-Attending Behavior	1	6.5	1
Emotional Disturbance	2	5	2
Experiential Deprivation	3	6.5	3
Communication and Language Problems	6	2	4.5
Inability Properly to Process Information and Stimuli	5	3.5	4.5
Mental Retardation	7	1	6
Withdrawal or Non-Assertive Behavior	4	14	7
Lack of Educational Provisions	9	8.5	8
Poor Coordination and Motor Skills Difficulty	8	16	9
Special Physical Impairment Other Than Visual Impairment	10	8.5	10
Adjustment to and Poor Use of Vision	11	11.5	11
Unacceptable Social Skills	12	14	12
Poor Orientation and Mobility	13	11.5	13
Need for Individual Instruction or Attention	15	3.5	14
Lack of Self-Help and Daily-Living Skills	16	10	16
Other	14	14	15

1 indicates the area of most responses.
16 indicates the area of fewest responses.

Reported Differences in Educationally Significant Characteristics of the MHVI Child and the Child with Visual Impairment Only

The mhvi child's need for individualized attention or instruction was indicated 77 times as one of the most significant differences between this child and the child whose only handicap is visual impairment. The mhvi child was also characterized as being slower in accomplishing learning, or in completing tasks. The mhvi child was depicted as a child with a greater need for success, a poor self concept, and a lack of confidence. Table 24 indicates these and other differences.

INFORMATION ON THE EDUCATIONAL NEEDS OF THE MHVI CHILDREN REPORTED IN THIS STUDY

Areas of Educational Concern Reported as Most Significant for MHVI Children

Respondents indicated communications skills as the area of most significant educational concern for mhvi children. A closely ranked second was the development of self-care and daily-living skills. This material is summarized in Table 25.

Responses on the long and shortened form differed significantly (at the .001 level). There was agreement that communication skills was the area of most concern. The difference was largely between the emphasis placed on

Table 24

Reported Differences in Educationally Significant Characteristics of the MHVI Child and the Child with VI Only

Differences possessed by the mhvi child	No. of responses
The child requires more individualized attention or instruction.	77
The child is slower in accomplishing learning or completing tasks.	42
The child has a greater need for success, has a poor self concept and lacks confidence.	17
The child has a short attention span and is highly distractible.	14
There are more problems in the area of socialization.	10
There is a greater need to plan for the development of self direction, initiative, and independence.	10
There is a lack of motivation for learning.	9
Emotional disturbance is commonly found.	7
There are fewer avenues of input.	6
The mhvi child has more involved problems.	4
The child is often isolated.	3
There is a greater percentage of retardation.	2
Other	13
Total	214

N = 247 respondents
Each respondent was allowed the maximum of two responses.

Table 25

Frequency of Areas of Educational Concerns Reported as Most Significant for MHVI Children

Area of educational concern	Responses			Rank		
	Long form	Shortened form	Total	Long form	Shortened form	Total
Motor Skills Development	61	8	69	6	6	7
Orientation and Mobility	92	10	102	3	5	3
Self-Concept Formation and Emotional Development	53	19	72	7	2	6
Communication Skills	150	20	170	1	1	1
Self-Care and Daily-Living Skills	146	16	162	2	3	2
Sensory Development	47	4	51	8	7.5	8
Cognitive Processes	39	3	42	9	9	9
Socialization Skills	64	13	77	5	4	5
Academic Content and Skills	83	4	87	4	7.5	4
Other	12		12	10	10	10

(1) self-concept formation and emotional development and (2) academic content and skills. The long form respondents gave less priority to self-concept formation and emotional development. Academic content and skills were held as less significant by the persons responding to the shortened form than by those who completed the long form.

Analysis of Instructional Time

Respondents were asked to indicate the percentage of instructional time spent in various areas. This information was analyzed in two ways. First, a rank number of one to eight was assigned to each area with one indicating the area of most time spent and eight, the least. Second, an average of the percentage of time was obtained for each area. Some answers could not be used for this second measure because a base of greater than one hundred percent had been used by respondents. Table 26 presents the rank order of the instructional areas as follows:

1. Communication Skills
2. Cognitive Processes
3. Sensory Development
4. Motor Skills
5. Self-Care and Daily-Living Skills
6. Self-Concept Formation
7. Mobility or Premobility Skills
8. Other.

Table 26

Ranking of Instructional Areas According to Time Spent in Each

Instructional area	Rank
Motor Skills	4
Mobility or Premobility Skills	7
Self-Concept Formation	6
Communication Skills	1
Self-Care and Daily-Living Skills	5
Sensory Development	3
Cognitive Processes	2
Other	8

N = 231 respondents

1 was scored as the area of most time spent.
8 was scored as the area of least time spent.

There was a difference in rank ordering using the two methods of analysis of this data. Motor skills, self-care and daily-living skills, and sensory development took a slightly different rank position (see Table 27). There was a difference of less than one percent on the mean scores of these three areas.

The Spearman rank correlation coefficient was applied to measure the association between the two samples. There was a possible relationship between the two forms significant at greater than the .01 level.

Reported Differences in Educational Programming for the MHVI Child and the Child with Visual Impairment Only

When asked to indicate the differences in educational programming for a mhvi child and a child with visual impairment as the only handicap, the respondents cited the emphasis in curriculum. It was held that the curriculum should be more experience- and life-centered and that it should stress concreteness. Second, the persons responding to this question pointed out the need to work in the area of language and communication development. Greater use of repetition was held to be especially essential in the learning process. Another often repeated need was that of instructional materials especially designed for mhvi children. These points and others are presented in Table 28.

Table 27

Reported Percentage of Instructional Time According to Area

Instructional area	Mean of reported percentages of time spent	Rank
Motor Skills	12	3
Mobility or Premobility Skills	7	7
Self-Concept Formation	8	6
Communication Skills	19	1
Self-Care and Daily-Living Skills	11	4
Sensory Development	11	5
Cognitive Processes	15	2
Other	3	8

N = 192 respondents

1 indicates the area of most time spent.
8 indicates the area of least time spent.

Table 28

Reported Differences in Educational Programming for the MHVI Child and the Child with VI Only

Needs of the mhvi child	No. of responses
The curriculum should be more experience- and life-centered. It should stress concreteness.	49
There needs to be a special emphasis given to the development of language and communication.	42
More repetition is essential to the learning process.	24
There is a need for materials especially designed for these children.	23
The teacher must have special skills, training, and ability.	14
More instruction is needed in the area of basic skills and concepts using a simplified curriculum.	13
The curriculum should stress motor skills development.	13
There needs to be more concrete-tangible learning aids and materials.	13
A number of auxiliary services are needed.	11
The curriculum must stress mobility skills.	11
The educational process must involve the parents to a greater extent.	9
A special enrichment education needs to be provided at earlier ages.	7
The curriculum must stress sensory development.	7
The educational process must use a multi-sensory approach.	6
Other	22
Total	264

N = 247

Each respondent was allowed the maximum of two responses.

Instructional Materials Needs

Respondents ranked seven areas according to the need for instructional materials (see Table 29). These areas were so ordered beginning with the area of most need:

1. Communication Skills
2. Self-Concept Formation
3. Sensory Development
4. Motor Skills
5. Cognitive Processes
6. Self-Care and Daily-Living Skills
7. Mobility and Premobility Skills.

Suggestions of the Most Beneficial Instructional Materials

When asked to comment on instructional materials, teachers frequently responded with their feelings of inadequate knowledge of what was available and of how to select materials. They felt there was a need for development of materials in all areas, but that these must be especially designed for the mhvi child. Another reply indicated repeatedly was the opinion that there were few suitable materials available.

Table 30 shows the number of suggestions of the most beneficial materials for each of the instructional areas listed. In order of the greatest number of suggestions made by the 215 respondents, the areas would rank as follows:

Table 29

Ranking of Instructional Areas According to Reported Need for Instructional Materials

Instructional area	Average ranking	Rank
Motor Skills	4.20	4
Mobility and Premobility Skills	4.98	7
Self-Concept Formation	3.65	2
Communication Skills	3.20	1
Self-Care and Daily-Living Skills	4.24	6
Sensory Development	3.79	3
Cognitive Processes	4.21	5
Other	7.42	8

N = 293 respondents

1 was scored as the area of most need.
8 was scored as the area of least need.

Table 30

Quantative Analysis of Suggestions of the Most Beneficial Instructional Materials

Instructional area	No. of materials suggested[a]	Rank
Motor Skills	485	1
Mobility and Premobility Skills	190	6
Self-Concept Formation	178	7
Communication Skills	405	2
Self-Care and Daily-Living Skills	224	5
Sensory Development	361	3
Cognitive Processes	296	4

[a]Indicates the sum of suggestions given by 215 respondents.

1 indicates the area of most suggestions.
7 indicates the area of fewest suggestions.

1. Motor Skills
2. Communication Skills
3. Sensory Development
4. Cognitive Processes
5. Self-Care and Daily-Living Skills
6. Mobility and Premobility Skills
7. Self-Concept Formation.

Listed by area, the specific instructional materials most often suggested as beneficial are:

1. Motor skills development
    a. manipulative materials such as weaving, knitting, or crocheting materials
    b. pegboards
    c. beads for stringing
    d. Constructo sets
    e. put-together toys
    f. nesting cups
    g. clay or modeling materials
    h. ceramics or sculpturing materials
    i. building blocks
    j. snapbeads
    k. sets of locks or fasteners
    l. Montessori equipment
    m. large crayons
    n. tools
    o. riding toys

p. skates

q. climbing apparatus (tunnels, stairs, bars, balance boards, obstacle course, ladders, etc.)

r. balls

s. rhythm records

t. trampolines

u. gym mats

v. swimming pools

w. exercisers

2. Mobility and premobility skills

a. audible goal indicators

b. canes

c. walkers

d. balance beams

e. parallel bars

f. hand rails

g. audible compass

h. balls with bells

i. directional games

j. models of school grounds, geographical areas

k. stairs

l. incline ramps

3. Self-concept formation

a. records dealing with identification of body parts
b. mirrors
c. life-size body models
d. people puzzles
e. dolls
f. books on the individual, family, and community

4. Communication skills
   a. Peabody Language Development kits
   b. auditory training units
   c. language masters
   d. braillers
   e. tape recorders
   f. listening records
   g. listening booths
   h. word games
   i. phone trainer units
   j. speech development records
   k. vocabulary aids

5. Self-care and daily-living skills
   a. dressing frames
   b. self-care tools (such as combs)
   c. large type print cookbooks
   d. kitchen work areas

6. Sensory development
    a. puzzles
    b. touch and tell books
    c. tactual materials
    d. clay
    e. finger paints
    f. beaded letters (also sandpaper letters)
    g. "smell" kits
    h. rhythm instruments
    i. shaped objects for matching
    j. sorting and discrimination materials
    k. sound cylinders
    l. sorting boards or trays
    m. fabrics
    n. recorded sounds
    o. weight discrimination sets
    p. tuning forks
    q. pianos
    r. audio-visual training materials
    s. braille readiness books
7. Cognitive processes
    a. abacuses
    b. number games
    c. clock faces
    d. calendars
    e. geometric inset puzzles

f. number aids

g. number lines

h. Stern materials

i. sequential pictures

j. measuring utensils

k. Mitchell wire forms

l. blocks for sorting and matching

m. puzzles.

Suggestions of Instructional Materials Which Need to Be Developed

Respondents proposed a number of general suggestions concerning materials needs. They stated that there need to be more materials which:

1. Relate to practical and real situations
2. Are of a high-interest, low-vocabulary nature
3. Are for mentally retarded blind children
4. Focus on concreteness, physical attractiveness, and flexibility
5. Use color (especially in large type materials)
6. Meet the needs of the older child with low functioning
7. Are especially sturdy and durable
8. Emphasize prevocational and vocational skills
9. Creatively present basic concepts in a variety of ways

10. Can be used as games for older children
11. Can be used by parents
12. Utilize listening skills at the levels of low-functioning children
13. Are multi-sensory and multi-purposive
14. Stress sequential learning
15. Feature communications skills development as a primary focus.

Table 31 is a quantative analysis of suggestions made by 180 respondents regarding instructional materials. The largest number of suggestions for the development of needed materials was in the areas of motor and communication skills. Listed according to areas, the most frequent suggestions were:

1. Motor skills
    a. materials for the development of finger dexterity and hand usage
    b. playground equipment and riding equipment large enough for older children
    c. simplified puzzles
    d. more manipulative materials which are large enough to teach basic movements
    e. specific task materials to teach actions such as the opening of lids, turning of door handles, etc.
    f. simple put-together or interlocking toys

Table 31

Quantative Analysis of Suggestions of Instructional Materials Which Need to Be Developed

Instructional area	Number of suggestions[a]	Rank
Motor Skills	135	1
Mobility and Premobility Skills	79	6
Self-Concept Formation	77	7
Communication Skills	126	2
Self-Care and Daily-Living Skills	86	5
Sensory Development	105	3
Cognitive Processes	99	4

[a]Indicates the sum of suggestions given by 180 respondents.

1 indicates the area of most suggestions.
7 indicates the area of fewest suggestions.

2. Premobility and mobility
   a. simple three dimensional models of town or geographical areas
   b. toy or playground equipment which can help develop directional concepts
   c. scale models of houses and other large structures
   d. equipment for children at the pre-walking or pre-crawling stage
3. Self-concept formation
   a. realistic and life-size models of the body
   b. stories or books dealing with the "self" and relationships with other persons
   c. take-apart dolls
4. Communication skills
   a. more high-interest, low-level reading materials in large type print and braille
   b. more high-interest, low-vocabulary tapes
   c. materials to stimulate speech in a child who is non-verbal
   d. records to use in teaching sound discrimination
   e. language cards with easily discernible pictures
5. Self-care and daily-living skills
   a. inexpensive self-care kits

b. high-interest, low-vocabulary vocational materials

c. simplified cookbooks

6. Sensory development

a. kits for the development of touch, smell, and taste

b. records for sound identification at basic levels

c. easily discernible pictures and visual materials for the development of visual discrimination

d. scaled realistic models of large objects and animals

7. Cognitive processes

a. practical math guides, texts, and workbooks

b. simple materials to help children learn to organize concepts

c. games which incorporate reasoning processes

d. simple models of operational devices such as motors or pumps

e. materials which can aid in teaching the concept of cause and effect

f. materials for children with perceptual problems

g. listening materials to stimulate discussion on subjects such as home, foods, safety, etc.

h. pictures for the teaching of sequential events

i. models of growth processes

j. materials to help in the development of basic abstract ideas.

Basic Facilities Needed

Respondents to the questionnaire indicated that the mhvi child especially needs facilities other than the classroom. They suggested the following:

1. a gymnasium
2. a physical therapy room
3. an apartment or house which can be used as a home living area
4. a kitchen or home economics department
5. an outdoor playground.

SUMMARY

The data from the questionnaires were organized according to three areas:

1. General information about the organizations participating in this study
2. Information reported by persons working with mhvi children concerning these children's needs and functioning from an educational perspective
3. Structures of current educational programs.

More than four hundred persons from 159 organizations assisted in supplying this information.

General Information Concerning the Organizations Participating in This Study

The organizations in the study were classified according to basic program types (state residential, public day, private residential, and private day). Forty-five percent of the organizations had public day and 35 percent had state residential programs. The majority (59 percent) of the organizations were designed essentially for serving children with visual impairment. Twenty-six percent were geared primarily for mentally retarded, deaf, deaf-blind, multi-handicapped, or mhvi children. The remaining 15 percent were designed for children with a variety of single or combinations of handicapping conditions. This distribution of organizations afforded comparison of a variety of types of programs for mhvi children.

Of the mhvi children reported, 65 percent were in organizations designed primarily for children with visual impairment. Twenty percent were in institutions for the mentally retarded person. Fifty-eight percent of the mhvi children were in state residential schools.

Education was designated by 70 percent of the organizations as the primary type of service provided. Twenty-seven percent considered services in addition to

education as a major aspect of their work.

Fifty-seven percent of the organizations had programs during the regular school term only; 30 percent were in operation for the entire year. Eleven percent had special summer programs in addition to those of the regular school terms.

MHVI children were integrated with other handicapped or non-handicapped children in 44 percent of the organizations reported. Twenty-five percent reported two- or three-track programs. Of the single-track programs, 8 percent had the entire school for mhvi children, 5 percent had separate units, and 15 percent reported special classes.

The majority of mhvi children (61 percent) were in programs with fifty or fewer mhvi children. In fact, 44 percent of the organizations participating reported ten or fewer mhvi children.

General intellectual functioning and need for integration with other students were the two factors most frequently designated as determining how mhvi children were grouped. Forty-five percent of the mhvi children were in subject-oriented curriculums.

An average of 5.77 mhvi children per organization were turned away from the 115 organizations responding to this question. Public day programs turned away the smallest average number of children.

Data Reported About MHVI Children Being Served by the Organizations Participating in This Study

An average of 3.28 handicaps per child was indicated for the mhvi children reported. Visual impairment, mental retardation, speech defects, and emotional disturbance were the handicapping conditions of most frequent occurrence.

Only 307 mhvi children were reported as having a visual acuity of better than 20/200 while 2,225 were classified as legally blind. Of the legally blind children, less than half (1,027) were totally blind.

The age range of the children reported was twenty-one years. Forty-nine percent were thirteen or older and only 12 percent were five or younger.

Twenty-four percent of the mhvi children reported were classified as non-verbal. These were children who had not demonstrated the ability to use language as a means of communication.

Twenty-eight percent of the mhvi children reported used braille; 29 percent used large type print, and 4 percent were able to use regular print. Twenty-seven percent used listening materials only and 12 percent could use none of these above-mentioned learning modes.

Seventy-six percent of the mhvi children were reported as needing individualized instruction most of the

time. This need was also indicated as the main differences between the mhvi child and the child whose only handicapping condition was visual impairment.

The four problems pinpointed as those most hindering learning were:

1. Non-Attending Behavior
2. Emotional Disturbance
3. Experiential Deprivation
4. Communication and Language Problems.

The mhvi child was characterized as being slow in accomplishing learning or in completing tasks.

Information on the Educational Needs of the MHVI Children Reported in This Study

Communication was designated as the most significant area of educational concern for mhvi children, and it was in this area that the largest percentage of instructional time was spent. The curriculum for these children was reported as needing to be experience and life centered. It needed to stress concreteness. More repetition than usual was required before a mhvi child could grasp a concept.

Motor skills and communication skills were the two areas in which the most beneficial instructional materials were reported. These same areas were considered as the areas in which there was the most need for development

of materials.

Respondents indicated that instructional materials should be very practical, durable, and should appeal to a number of sense modalities. It was pointed out that more materials were needed for teaching basic and elementary concepts, especially those needed by a low-functioning child. Instructional materials were especially valuable when useful in accomplishing a number of purposes.

Chapter 5

DISCUSSION OF THE QUESTIONNAIRE RESPONSES

The purpose of this chapter is to discuss the data presented in Chapter 4. An attempt is made to show the relationships between various items of information from the questionnaire returns, compare responses with other reports on mhvi children, and interpret some of the results.

For the purpose of change in emphasis, the discussion of the data in this chapter is presented in an order different from that of the preceding chapter. The first section deals with data relating to the distribution and characteristics of mhvi children; the second focuses on educational procedures and provisions. Some of the data which is largely background information is not discussed.

Differences between the long and shortened questionnaire forms are discussed briefly; however, the major thrust of this chapter is to deal with the total response. This study was concerned with generalized statements of educational needs of mhvi children rather than with characteristics of specific groups.

THE MHVI CHILD

Distribution of the MHVI Children Reported in this Study

Organizational emphasis on type of handicapping condition. The majority (65 percent) of mhvi children reported were in programs designed primarily to serve visually impaired children. Thirty-five percent (1,211) were in programs with primary concerns for children with handicapping conditions other than visual impairment. Included in these organizations were children who were mentally retarded, deaf, deaf-blind, multi-handicapped, mhvi, or who had one of a number of miscellaneous handicapping conditions.

Organizations designed primarily to serve the mentally retarded person reported 21 percent (706) of the total number mhvi children in this study. These were children participating in an educational program and not those in custodial care only. Most of these organizations were state residential institutions operating on a twelve month basis, which means that the children were separated from their homes. Children who are denied admission to a program serving children who are visually impaired usually have no alternate choice of placement other than in programs for the mentally retarded.

Four percent (142) of the children reported were in public day programs serving a combination of handicaps. This arrangement was the only one that had the possibility of grouping children on a functional basis as opposed to grouping according to traditional medical diagnostic labels. This would provide an opportunity for children to be placed in groups according to their abilities or educational needs in a manner that cuts across these traditional labels.

Type of program. Fifty-eight percent of the children were in state residential programs. These were largely made up of programs designed principally for the visually impaired and mentally retarded child.

Two organizations had programs for a combined total of 70 deaf-blind children. Children had to be sent out of their home communities in order to be enrolled in these two programs for deaf-blind children. No organization reported a private or day program designed primarily to serve deaf-blind children. There were some children considered as being deaf-blind in some preschool public day classes but few organizations were engaged in serving this group.

Only 19 percent of the children were in privately supported programs. Costs of such programs limit the number enrolled and are sometimes prohibitively expensive for the parents who have to pay fees for their child.

Size of program. Sixty-one percent of the children reported were in programs serving fifty or fewer mhvi children. Thirty-nine percent were in programs of thirty or fewer. Of the 158 programs reported, 121 were serving fewer than thirty children.

Most of the programs were serving a very small number of mhvi children. This indicates a widespread population. Most of the local and day programs were serving only a few mhvi children. Groups of more than fifty mhvi children were almost always found in residential programs.

Discrepancies between the long and shortened forms. There were significant differences between the number of mhvi children reported on the long and shortened questionnaire forms when these children were classified according to types of organizations.

All but three of the children reported on the shortened form as being in organizations geared fundamentally to serve mentally retarded children were in state residential programs. Thus, 44 percent of all children reported on the shortened form were in state residential programs for the mentally retarded. Only 14 percent of those reported on the long form were in state residential programs designed primarily to serve persons with mental retardation.

The number of mhvi children served differed for organizations using the long and shortened forms. The majority of children (68 percent) reported on the shortened form were in programs of more than fifty mhvi children. The exact reverse was true for the distribution of children on the long form. The majority of the children reported on the long form (68 percent) were in programs of fewer than fifty mhvi children.

It is a logical expectation that the shortened form would be predominantly from larger organizations and programs designed primarily for the mentally retarded. After eight weeks, the shortened form was sent to the organizations which had not responded to the first questionnaire mailing. Longer delays in responses could be expected from programs with larger numbers of children because of the longer period of time required in completing the answers to the questions. Teachers in state residential programs for the mentally retarded are responsible for more students than teachers in state residential programs for the visually handicapped. Wolf reported that the number of students in special classes for the mentally retarded blind ranged from 10 to 23 pupils.[1] In this current study,

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[1]James M. Wolf, The Blind Child with Concomitant Disabilities (New York: American Foundation for the Blind, 1967), p. 42.

137 teachers in state residential organizations for visually impaired children reported on 1,244 pupils (an average of 9 per teacher) while 29 teachers in state residential organizations for the mentally retarded reported on 687 children or an average of 24 per teacher. Greater responsibilities per staff member would mean that these persons would have less time to devote to activities such as responding to a questionnaire.

The differences between the long and shortened form responses indicate possible differences in educational programming. Respondents on the shortened form recorded the following differences from the replies on the long form:

1. Fewer children were seen as requiring individualized instruction

2. Level of socialization was emphasized more in determining the grouping of children

3. Mental retardation was considered to be a more significant problem which hindered learning by mhvi children

4. More emphasis was placed on self-concept formation and emotional development and less emphasis was given to academic content and skills development.

Wolf found in his study that the majority of administrators and teachers of the mentally retarded visually impaired child were likely to view the mental

retardation as the "primary disability."[2] This view can make significant differences in educational involvements. A child labeled as mentally retarded may conform to this label whether or not he has greater potential. Rosenthal reported studies that indicate teacher expectation does modify students' behavior.[3] Many blind children appear to be retarded and this heightens the possibility of errors in diagnosis.

The emphasis on mental retardation parallels a lack of awareness of visual acuity. Programs designed primarily to serve the mentally retarded person report the largest number of children for whom the degree of vision was unknown. Some of these children may be very difficult to examine or test. It appeared that organizations geared primarily for mentally retarded children are less prepared to deal with children with visual losses, and that children placed in these programs may be at a considerable disadvantage as far as their educational progress is concerned.

Characteristics of Educational Significance

Handicapping conditions. There was an average of 3.28 handicaps per child reported for the children in this

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[2]Ibid., p. 31.

[3]Robert Rosenthal, Experimenter Effects in Behavioral Research (New York: Appleton-Century-Crofts, 1966), p. 412.

study. All the children in this study were included because they had at least two educationally significant handicapping conditions, one of these being visual impairment. Some children enrolled in the organizations participating in this study had more than one handicapping condition. They were not reported, however, because the other handicaps were not considered as requiring special educational provisions.

Previous studies discuss the number of handicapped children who have multiple handicaps and average handicaps per child. Bucknam studied 137 blind children. Forty-one of these had no other handicapping condition in addition to blindness. An average of 2.3 handicaps was reported for the entire group of 137 and 2.84 for the 96 mhvi children.[4] Ashcroft identified only 220 out of 1,176 mhvi as having more than two handicaps.[5]

This present study reveals a greater average number of handicapping conditions per child than some of the earlier studies. This reflects the fact that more

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[4]Frank G. Bucknam, "Multiple-Handicapped Blind Children (An Incidence Survey)," The International Journal for the Education of the Blind, 15:47, December, 1965.

[5]American Printing House for the Blind, "Report: Survey of Multiple-Handicapped, Visually Handicapped" (Louisville: American Printing House for the Blind, 1955), p. 3. (Mimeographed.)

organizations have become willing to serve mhvi children[6] and have developed a better awareness and identification of concomitant handicapping conditions. More organizations are moving in the direction of serving more children of low functioning and of complex handicapping conditions. There are children now being served who would have been turned away a few years ago. The average number of handicapping conditions for the children in public school programs for handicapped children shows that these programs have begun to make this response.

Of the organizations participating in this study, those with programs designed chiefly for serving the mentally retarded reported nearly four handicapping conditions per mhvi child. Wolf reported an average of 3.18 for the mentally retarded children in his study.[7] This figure would be lower than the current study because Wolf limited his investigation to the forty-eight residential schools for the visually impaired and did not survey organizations primarily serving mentally retarded persons.[8] In the survey by Graham, 80.2 percent (7,131) of the sample

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[6]J. W. Jones and Anne P. Collins, Educational Programs for Visually Handicapped Children (Washington: U. S. Government Printing Office, 1966), p. 28.

[7]Wolf, The Blind Child, p. 54.

[8]Ibid., p. 21.

studied was considered as mentally retarded.[9] Graham considered this percentage to be extremely high.[10] The present study reported 66 percent of the children to be mentally retarded. According to Graham, this appeared to be a more realistic estimation.

Mental retardation was considered as the most frequently occurring handicapping condition in addition to visual impairment for the mhvi children reported in this study. Lairy and Graham both called attention to a condition of pseudoretardation resulting from understimulation.[11,12] It is especially difficult to assess the actual intellectual capabilities of mhvi children. The high prevalence of mental retardation in this and other studies should be considered with an awareness of possible pseudoretardation. Piaget concluded that it was virtually impossible to draw a clear line between innate and acquired behavior patterns.[13]

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[9]Milton D. Graham, Multiply Impaired Blind Children: A National Problem (New York: American Foundation for the Blind, 1968), p. 13.

[10]Ibid.

[11]Gabrielle-Catherine Lairy, "Problems in the Adjustment of the Visually Impaired Child," New Outlook for the Blind, 63:36, February, 1969.

[12]Graham, Multiply Impaired Blind Children, p. 14.

[13]Elizabeth Hall, "A Conversation with Jean Piaget," Psychology Today, 3:32, May, 1970.

When indicating handicapping conditions according to medical categories, there was a consistency between the Wolf study and this present study in reporting mental retardation, speech defects, and emotional disturbance as the most frequently occurring handicapping conditions in addition to visual impairment.[14] Graham reported brain damage to be more prevalent than emotional problems, but otherwise his study revealed these same key handicapping conditions.[15] Bucknam did not report the number of children having speech disorders; however, visual impairment, psychiatric disorder, and mental retardation were the three most frequently identified handicapping conditions in his study.[16]

Gall and Cohen both speculated that there is a high probability of neurological abnormality occurring in blind persons.[17,18] This is supported by the high number of children reported in this study as having brain damage.

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[14]Wolf, The Blind Child, p. 34.

[15]Graham, Multiply Impaired Blind Children, p. 30.

[16]Bucknam, op. cit., p. 47.

[17]Elena D. Gall, "Needed Research in the Field of Services for the Multiple-Handicapped Blind," Blindness Research: The Expanding Frontiers, eds. Maxwell H. Goldberg and John R. Swinton (University Park: Pennsylvania State University Press, 1969), p. 448.

[18]Jerome Cohen, "The Effects of Blindness on Children's Development," New Outlook for the Blind, 60:151, May, 1966.

The state residential and public day programs designed primarily to serve visually impaired children reported averages of 2.96 and 2.93 handicaps per child. These were below the average for the whole sample. This may reveal some reluctance on the part of these organizations to serve children with multiple handicaps.

Age. In order to avoid any stigma carried by the label, diagnosis of mental retardation, brain damage, or emotional disturbance is often delayed for years. This is done as an attempted service to the children. This hesitation to consider children as multi-handicapped is one reason that nearly one half of the children reported were thirteen or older. Graham's study had nearly 51 percent in this over twelve year group.[19]

Some of the children in the 0-5 year old classification were in special public day programs. The number of children listed in this age group (375) did not seem to reflect the large wave of mhvi children affected by the rubella epidemics.[20] However, only 6 percent of the mhvi

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[19] Graham, Multiply Impaired Blind Children, p. 7.

[20] U. S. Office of Education, Bureau of Education for the Handicapped, Policies and Procedures, Centers for Deaf-Blind Children, Elementary and Secondary Education Act, Title VI, Part C (Washington: Government Printing Office, April, 1969), p. i.

children surveyed by Graham were below age six.[21] Some of the children affected by the rubella epidemics may be either at home or in other educational programs since these children have such a wide diversity of handicapping conditions. The rather small number in this youngest age group also indicated the absence of programs for very young children. The lack of formal educational assistance for the mhvi child during the first five years is especially critical.

The 6-9 year group and the 10-12 group were almost equal in number, the younger group containing 19 percent and the older containing 20 percent of the total number of children reported.

The total age range was twenty-one years, but the level of functioning in most areas for the majority of the mhvi children reported was lower than for the average ten year old child. Even the academic skills proposed in the responses were very similar to those which are usually taught to a child during the first four years of school.

Visual acuity. Only 37 percent (1,027) of the mhvi children reported were classified as totally blind. This means that the majority of the mhvi children reported had some vision which might be utilized or developed. Graham

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[21]Graham, Multiply Impaired Blind Children, p. 7.

reported 36.1 percent of the 8,887 mhvi children surveyed to have reading vision.[22]

Of those reported as totally blind, 84 percent were blind before the age of three. This means that a very small number of the totally blind children reported were adventitiously blinded.

The largest number of mhvi children (1,198) had a visual acuity of 20/200 or less. The largest group being served by the public day program for visually impaired children were in this classification.

There were 307 children with a visual acuity better than the legal definition of blindness. The largest number of these were in public day programs for visually impaired children.

A severe loss of peripheral vision was reported for 170 children, 106 of these being in state residential schools for the visually handicapped. The public day programs were serving thirty-two children with field vision losses.

The degree of vision was unknown for 271 mhvi children. The largest number of these children were in state residential programs for the mentally retarded. These children often exhibit so many other behavioral disorders that visual acuity appears to be of minor concern

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[22]Ibid., p. 52.

or difficult to ascertain.

The majority of children in the state residential programs were classified as legally blind. The public day programs appeared to serve more students with a considerable amount of residual vision than those with severe losses. Jones and Collins stated that about one fourth of the local school programs provided only for partially seeing children.[23] Privately supported programs were serving mainly children who could be classified as legally blind. Of their totally blind children, 88 percent had been blind before the age of three.

Mode of learning. Braille users comprised 28 percent of the children reported in this study. Thirty-three percent were print users; 29 percent used large type, and 4 percent utilized regular type. Forty-one percent of the 3,375 mhvi children reported in the 1968 registration at the American Printing House for the Blind were braille users; 35 percent used large type, and 3 percent used both braille and large type.[24] In the Wolf study, 68 percent of the mentally retarded blind pupils in special classes

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[23]Jones and Collins, Educational Programs, p. 10.

[24]American Printing House for the Blind, "Summary of Grade Placement of Multi-Handicapped Visually Handicapped Students by State Departments and Residential Schools" (Louisville: American Printing House for the Blind, 1968), p. 10. (Mimeographed.)

received reading instruction in braille and 30 percent used printed materials. Teachers, however, indicated that although they were being given instruction in reading, 28 percent of the children were considered non-readers.[25] Variety in the definitions of what it means to be a braille user accounted for some of the discrepancy in the percentages given. There is a growing awareness that braille may not be an appropriate method for some students.[26] Graham indicated that the outdated policy of teaching braille to severely visually impaired children, whether they can read print or not, still influences educational procedures.[27] Data collected in this study revealed that this outdated philosophy is being put aside.

Twenty-seven percent of the children in this study used listening materials only. This would explain why there is a request for more listening materials, especially of a high-interest, low-vocabulary type. A recent study by Steele supported the hypothesis that listening may be a more effective mode for blind children of low ability.[28]

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[25]Wolf, The Blind Child, p. 32.

[26]Carson Y. Nolan and Cleves J. Kederis, Perceptual Factors in Braille Word Recognition (New York: American Foundation for the Blind, 1969), p. 47.

[27]Graham, Multiply Impaired Blind Children, p. 17.

[28]Nancy W. Steele, "Learning by Blind Children of Low Ability: The Relative Efficiency of Reading and Listening," (unpublished Doctor's dissertation, George Peabody College, 1969), p. 43.

Graham's study also recognized that many multi-handicapped blind children learn largely through the listening mode, and that at the time of the study, there was a lack of records and tapes to implement this method.[29]

Twelve percent of the mhvi children reported in this study were identified as using neither braille, print, nor listening modes. Some of these children no doubt can be classified as being non-verbal. Respondents indicated that because of their young age and slowness in learning, many of these children were functioning at a level prior to meaningful use of language. Some of these children have severe hearing losses and were considered as being deaf-blind.

Learning modes require certain sensorimotor skills, one sense-modality being dominant in each mode. Piaget attributed the basic adaptive behavior in the infant to the child's integration and coordination of various sense modalities.[30] Developmental delays in cognitive processing can be anticipated in children who have impaired sense-modalities. The recognition and recent push for the development of the use of remaining sense functioning[31] is

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[29] Ibid.

[30] Alfred L. Baldwin, Theories of Child Development (New York: John Wiley and Sons, 1967), p. 190.

[31] Cleves Kederis and S. C. Ashcroft, "The Austin Conference on Utilization of Low Vision," Education of the Visually Handicapped, 2:33, May, 1970.

quite in line with a hope for better integration resulting in improved cognitive processing.

Mode of communication. Seventy-six percent of the children reported were considered verbal; 24 percent were classified as non-verbal. The large numbers of children with hearing losses and speech disorders suggested that one could expect to find a substantial number of children considered as non-verbal.

For the purpose of this study, non-verbal meant "not having demonstrated the ability to use language as a means of communication." Brown, Tretakoff, and Rogow all asserted that the lack of communication skills is especially detrimental to the educational process and the social acceptance of the child.[32,33,34] Erikson's theory shows a relationship between verbal ability and self identity. He stated:

> This intrinsic relationship of speech, not only to the world of communicable facts, but also to the social value of verbal commitment and uttered truth is strategic among the experiences which support

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[32]M. S. C. Brown, "The Multiple Handicapped Blind Child," Proceedings of the American Association of Instructors of the Blind, 47:25, June, 1964.

[33]Maurice Tretakoff, "What They Are All Doing," Proceedings of the American Association of Instructors of the Blind, 48:43, June, 1966.

[34]Sally Rogow, "The Non-Verbal Blind Child," New Outlook for the Blind, 63:2, January, 1969.

(or fail to support) a sound ego development.[35]

With this group of non-verbal children considerably more effort is required than with verbal children in order to produce desirable results.

Although Piaget concluded that there is a close relationship between language and thought, he did not see language as governing thoughts or form operations. Language was viewed as being influenced by operations.[36] This theory supported the possibility that non-verbal children can learn and that language is not essential to thought. In fact, Piaget stated that "you cannot teach concepts verbally; you must use a method founded on activity."[37]

Problems Which Hinder Learning

When asked to indicate the three problems which most hinder learning by mhvi children, the respondents with few exceptions replied in functional and behavioral terms rather than medical diagnostic categories. Non-attending behavior, emotional disturbance, experiential deprivation, language and communication problems, and the inability to process properly information and stimuli were the most

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[35]Erik H. Erikson, "Identity and the Life Cycle," Psychological Issues, 1:115, 1959.

[36]Hall, "A Conversation," p. 31.

[37]Ibid., p. 30.

frequently mentioned problems. Tupper suggested a very similar list of common behavioral manifestations.[38]

The mhvi children in this study were reported as having limitations in both receptive and expressive systems. Speech defects were diagnosed for 958 children and hearing impairments for 458. The diagnosis of brain damage, cerebral palsy, or epilepsy often signifies associated disruptions in cognitive processing. The classification of large numbers of children as non-verbal (24 percent), and as using neither braille nor print (39 percent), substantiated using a large percentage of instructional time in working toward the development of communication and language skills. The educator must have a variety of materials which utilize different learning modes. He must also attempt a number of approaches and methods. A great deal of creativity is required to communicate with a child who uses neither braille, print, nor listening modes. Twelve percent of the children reported were in this classification.

Respondents to the questionnaires reported 76 percent of the mhvi children in this study required individualized instruction most of the time. This type of

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[38]LaVerne Tupper, "The Multiply Handicapped Blind Child in New York State," New Outlook for the Blind, 56:244, September, 1962.

instruction demands increased program costs[39] and staff.[40] A child who shows non-assertive or withdrawal behavior and who requires individualized instruction is difficult to motivate. Instructional materials need to be especially attractive. These materials need to encourage independent functioning as much as possible in order to free the teacher to work with all of the students in the group. Many materials will not interest the child and therefore the selection of materials is especially important.

Reported Educational Differences Between the MHVI Child and the Child with Visual Impairment Only

Significant educational characteristics. A greater need for individualized instruction was suggested as the outstanding difference characterizing the mhvi child when compared with the visually impaired child who does not have other major handicapping conditions. Respondents also saw mhvi children as being slower in accomplishing learning or completing tasks. Moor said that these children are

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[39] Ferne K. Root, "Evaluation of Services for Multiple-Handicapped Blind Children," International Journal for the Education of the Blind, 13:33, December, 1963.

[40] Mary O'Meara, "An Experimental Program at the Illinois Braille and Sight Saving School for Developmentally Delayed, Visually Impaired Children," International Journal for the Education of the Blind, 16:19, October, 1966.

generally slow in learning self-help skills.[44] One reason given for this slowness in learning was that the mhvi child accomplishes very little through incidental learning and that more structure must be given to the learning situation. When compared with the child whose only major handicap is visual impairment, the mhvi child was depicted as having a poorer self concept, being more distractible, having more social problems, and possessing a poorer sense of self direction. Restricted avenues of input and a greater degree of isolation can result in behavior which could be incorrectly diagnosed as emotional disturbance or mental retardation.[42]

Differences in educational programming. The main differences in educational programming for the mhvi child and the child with only visual impairment were in the area of curriculum. For the mhvi child, these points were deemed essential:

1. The curriculum should be more experience- and life-centered. It should stress more concreteness.

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[41]Pauline M. Moor, "Services to Multiply Impaired Blind Children," Proceedings of the American Association of Instructors of the Blind, 48:39, June, 1966.

[42]Anna S. Elonen and A. C. Cain, "Diagnostic Evaluation and Treatment of Deviant Blind Children," American Journal of Orthopsychiatry, 34:625, July, 1964.

2. There needs to be special emphasis on the development of language and communication.
A simplified curriculum is required, featuring basic skills and concepts, sensory development, motor skills, and mobility skills.

More repetition was considered to be essential to the learning process for the mhvi child. The same material or concepts should be presented in a variety of ways. The need for multimodal repetition reflected the slow progress reported as characteristic of mhvi children. MHVI children were viewed as needing special instructional materials and more concrete-tangible learning aids. There was an emphasis on the need for a multi-sensory approach for mhvi children.

The teacher of the mhvi child was regarded as needing special skills, training, and ability. In Wolf's study of mentally retarded blind children, 82 percent of the special class teachers felt that additional training was needed.[43] MHVI children were also viewed as requiring more auxiliary services.

A special enrichment education was deemed as being needed for the very young child. One way of doing this was through the involvement of parents in the educational process for mhvi children.

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[43]Wolf, The Blind Child, p. 60.

EDUCATIONAL PROCEDURES AND PROVISIONS FOR MHVI CHILDREN

Types of Programs

There were a variety of types of organizations participating in this study. This gave the opportunity to compare services within each type.

Financial support. Eighty percent of the organizations participating in this study were supported largely with public funds; 20 percent received private support. The state supported residential organizations reported were not structured with the primary purpose of serving multi-handicapped children. The programs reported as being especially designed for mhvi children were privately supported. Although it may no longer be the general policy to exclude mhvi children from educational programs,[44] this study indicated that programs especially designed for multi-handicapped children were either public day programs or privately supported. At least one organization in this study was largely the result of efforts of parents to provide for their children when these children did not find satisfactory provisions in the publicly supported programs.

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[44]Jones and Collins, Educational Programs, p. 27.

Period of time programs are in operation. Most of the programs were in operation except for a brief part of the year, this being normally a two- or three-month period which was not considered part of the regular school term. Thirty percent of the programs did function for the entire year with another 11 percent having a special summer session. The largest number of programs in operation for the entire year were state residential programs serving mainly mentally retarded children. One program was in operation for the summer months only and thus was able to serve the children who were not involved in the programs which served them during the major portion of the year.

Fifty-one percent of the organizations provided services on a daytime basis only. Some of these were in operation for only one-half day. Forty-nine percent of the organizations had residential programs. Some residential programs also served students on a daytime basis.

Of the privately supported organizations primarily designed for serving multi-handicapped children, more had residential programs than day programs. Other than the two programs for deaf-blind children, the publicly supported programs designed primarily for multi-handicapped children were strictly on a daytime basis. Brown recommended that assessment be made in residential setting

before any permanent placement is made for the mhvi child.[45]

Organizational design. Forty-four percent of the children were functioning in integrated groupings with handicapped and non-handicapped children within the programs reported. Reasons given for this included:

1. The need to make the most of existing facilities and programs and hold additional cost to a minimum

2. The persuasion that association with other children was very important

3. A reluctance to place children into groups with special labels.

Some children were placed in special units only after it had been decided that they could no longer function well in an integrated group or when they needed a special type of instruction.

Twelve schools were listed as being entirely for mhvi children. Most of these had privately supported residential programs.

When a special provision for the mhvi child was made in an educational program, the more common procedure was to make use of a two- or three-track program. In other words, the organization might have a combination of special

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[45]Brown, "The Multiple Handicapped Blind Child," p. 22.

classes, separate units, or integrated classes. An individual child might spend part of the time in these specialized groupings and part within the groups of students who were not multi-handicapped. Other mhvi children had stationary placements. Some children received special provisions on an individualized basis and were not placed in special groups.

The heterogeneity of these programs, along with the fact that the privately supported organizations have broadened their services to include the mhvi child, suggests that many of these programs have been developed spontaneously as the needs arose. There were few indications that programs for mhvi children are the results of long term planning rather than of immediate pressures and needs.

Type of service provided. All of the organizations in this study were concerned basically with education. Twenty-eight percent also indicated other roles as being primary. These included such services as evaluation, diagnosis, treatment, and therapy. O'Meara spoke of such services as being ancillary,[46] but it would appear that a substantial percentage of the organizations participating in this study looked upon them as a primary function of the

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[46] O'Meara, "An Experimental Program," p. 19.

program. This may suggest support for comprehensive programs for mhvi children. This is in agreement with the idea of using a multi-disciplinary team approach.[47]

Three organizations considered their service to be a resource or auxiliary service. It was noted that these were adjunct to ongoing educational programs.

Educational Placement

Children denied admission during a twelve month period. Ashcroft pointed out the difficulty of finding educational services for mhvi children.[48] During a twelve month period, 115 organizations denied admission to an average of 5.77 mhvi children per organization. The 115 organizations reported a total of 663 children who were denied admission. Some of these children may have found other services. In California, Lowenfeld located 224 mhvi children (9 percent of those reported) of school age who were not in educational programs. This figure did not include children in custodial care programs.[49] One of the

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[47]E. F. Cicenia and others, "The Blind Child with Multiple Handicaps: A Challenge, Part I," International Journal for the Education of the Blind, 14:66, March, 1965.

[48]S. C. Ashcroft, "Delineating the Possible for the Multi-Handicapped Child with Visual Impairment," International Journal for the Education of the Blind, 16:54, December, 1966.

[49]Berthold Lowenfeld, "Multihandicapped Blind and Deaf-Blind in California," American Foundation for the Blind Research Bulletin, 19:31, June, 1969.

most difficult obstacles for the mhvi child may be that of gaining admission to an educational program. Jones and Collins asserted that because of multiple handicapping, children are often placed on waiting lists.[50]

Organizations with state residential programs designed primarily to serve mentally retarded persons turned away an average of 11.2 children per organization. Overcrowded conditions often force these organizations to deny admission to children. The only average which was higher than this was an average of 15 for the private residential organizations designed primarily for children with visual impairment. These organizations can be more selective of the children accepted. Organizations with public day programs turned away the lowest average number of children.

Children in a subject-oriented curriculum. MHVI children were generally placed in programs which did not focus largely on an academic curriculum. Only 45 percent were considered as being in a subject-oriented curriculum.

Organizations with state residential, private residential, and public day programs serving primarily visually impaired children reported nearly 60 percent of their students as being in subject-oriented curriculums.

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[50]Jones and Collins, Educational Programs, p. 27.

Only 13 out of 301 children in the state residential programs designed chiefly to serve mentally retarded children were in a subject-oriented curriculum. In these programs for mentally retarded children there is less emphasis on the more formal academic subjects. This was true for the private day programs designed principally to serve visually handicapped children.

Factors considered as determinant in grouping mhvi children. General intellectual functioning and need for integration with other students were the factors most often indicated as determinant in grouping mhvi children. They were often placed in special units or classes designed for evaluation, readiness, and preschool training. Special handicapping conditions, age, need for individual attention, and the flexibility of broadly graded groups were also influential in determining educational placement of mhvi children. A number of factors--rather than a single aspect--were usually considered in determining placement or grouping mhvi children.

In the study by Wolf, social maturity was the most frequently indicated criterion for grouping mentally retarded children for instruction.[51] This did not appear to be as significant a criterion for broader groupings of

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[51]Wolf, The Blind Child, p. 42.

mhvi students, especially because mental retardation was not always present in the mhvi children reported.

Instructional Programming

Significant educational concerns. Communication skills development was identified as the area of most significant educational concern for the mhvi child and the area in which most instructional time was spent. Respondents to the questionnaire ranked the following as the five most significant areas of educational concern for the mhvi child:

1. Communication Skills
2. Self-Care and Daily-Living Skills
3. Orientation and Mobility
4. Academic Content and Skills
5. Socialization Skills.

These areas largely stress the basic skills needed for functioning in society. In fact, many of the suggestions given for the development of academic content and skills were related to practical situations such as mathematical skills needed for simple business transactions or telling time.

Reports of programs of the Edward R. Johnstone Training and Research Center, and the California School for the Blind, gave evidence that the needs of mhvi children

rarely denote readiness for any type of formal academic learning.[52,53] The areas designated as most significant were those which connote an experience-centered curriculum.

It was interesting to note that cognitive processes, sensory development, and motor skills development were ranked least in significance for educational concerns for the mhvi child. Respondents may be focusing more on the hoped for results than on the development of process skills. For example, motor skills development is an essential part of developing good orientation and mobility. Orientation and mobility was much higher on a priority list.

Instructional time spent. Respondents reported that they actually spent most of their instructional time in the following areas:

1. Communication Skills
2. Cognitive Processes
3. Sensory Development
4. Motor Skills
5. Self-Care and Daily-Living Skills.

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[52]Cicenia and others, "The Blind Child, Part I," p. 67.

[53]Toshi Tekawa, "Multi-Handicapped Blind Children at the California School for the Blind," Education of the Visually Handicapped, 1:63, May, 1969.

When asked to indicate the outstanding areas of educational concern, the replies dealt more with the anticipated outcome of the educational process. On the other hand, when asked to designate how instructional time was used, the learning processes (such as motor skills) development were stressed. The first question dealt more with goals and theory; the second related to action and means.

Instructional Materials

Instructional materials needs. Communication skills, self-concept formation, sensory development, and motor skills were the four areas in which respondents ranked the need for instructional materials as being greatest. Motor skills, communication skills, and sensory development were the areas in which were given the most suggestions of materials which had been beneficial. It was in these same three areas where persons were able to make the most suggestions of specific materials needing to be developed. Self-concept formation ranked last in the number of suggested materials that have been beneficial.

The types of materials suggested as beneficial were very similar to materials used by very young children. The New York Institute for the Education of the Blind found regular educational nursery materials to be useful in a

special program for mhvi children.[54] The types of materials most frequently suggested were those which are designed to teach basic skills at an elementary level. Best and Winn found readiness materials to be of value.[55]

Teachers frequently attested to a feeling of inadequacy of knowledge of the availability and best selection of materials. This may be both a cause and a result of the fact that literature on mhvi children deals very little with instructional materials. There were repeated requests for assistance in this area as well as suggestions that a means of an interchange of information should be promoted. Several respondents suggested that institutes on instructional materials are highly desirable.

Ideally, the facilities for a program for mhvi children should include a variety of provisions geared especially for the development of physical abilities and practical living skills. The suggestions of facilities were very ordinary. There appeared to be less focus on formal, rather than on informal, academic classroom arrangement.

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[54]Merle Frampton and others, Forgotten Children, A Program for the Multihandicapped (Boston: Porter Sargent Publishers, 1969), p. 186.

[55]John P. Best and Robert J. Winn, Jr., "A Place to Go in Texas," International Journal for the Education of the Blind, 18:7, March, 1968.

Principles for materials development. The mhvi children in this study need materials which are multi-purposive and multi-sensory. Respondents in the study proposed that these materials need to be especially attractive, durable, and practical. Practicality was indicated as a key feature for which to look. It was stated that materials need to emphasize basic skills development and simplicity. Communication skills development was suggested as the area of most critical need.

SUMMARY

The MHVI Child

Although the majority of children were being served in programs designed for the visually impaired child, denial of admission to such programs often left no other choice than to apply to an organization for the mentally retarded person. Residential placement in either type implied a separation from the home. This appeared to be true for most of the deaf-blind children reported. Placement in a public day program means that children could be served according to functional categories because such programs are often equipped to serve children with a variety of handicapping conditions.

The population of mhvi children appeared to be widespread. Most programs were serving a very small number of children.

Discrepancies between the long and shortened questionnaire forms suggested that children in large organizations and programs designed especially for mentally retarded children received less individualized instruction. There also appeared to be less awareness of visual losses and functioning in programs for the mentally retarded child. Less emphasis was placed on formal academic content in institutions for the mentally retarded, and level of socialization was a significant factor in grouping mhvi children.

There was a greater average number of handicapping conditions per child for the mhvi children in this study than in most of the previous surveys. This reflected the fact that more organizations have become willing to serve children with low functioning and complex disabilities.

Mental retardation continued to be the most frequently reported handicapping condition in addition to visual impairment. Pseudoretardation resulting from experiential deprivation or the difficulty in assessing the intellectual ability of mhvi child accounted in some measure for the high prevalence of diagnosed mental retardation.

There was some hesitation to attach the diagnosis of mental retardation, brain damage, or emotional disturbance to visually impaired children. This could be one reason why more than half of the children reported were

thirteen or older.

There still appeared to be a lack of programs for the young mhvi child. Only 375 children were reported in the classification of children under six years of age. These are especially critical years in which an enrichment curriculum and parental involvement are vital in the education of mhvi children.

Most mhvi children reported had residual vision. The largest group of children with partial vision were in public day programs. Most of the mhvi children in state residential programs were classified as legally blind.

There was fairly equal distribution between users of large type, braille, and listening materials. It was recognized that braille may be of limited use for the majority of mhvi children. The need for a variety of learning modes accents the adaptations required for the mhvi child. There needs to be more development of recorded materials. A substantial number of mhvi children function at a level prior to the development of the use of braille, print, or listening materials. Some of these are non-verbal. Lack of verbal ability does not preclude thought processes, but it fails to support ego formation.

Key problems of non-attending behavior, emotional disturbance, experiential deprivations, communication deficiencies, and cognitive processing resolve around limited sensory input. MHVI children were slow in

completing tasks and apparently accomplish very little through incidental learning. These problems were expressed in the fact that respondents classified 76 percent of the mhvi children reported as requiring individualized instruction most of the time. The educator must experiment both with methods and materials to overcome these problems.

The curriculum for mhvi children was seen as best when stressing basic skills, practical situations, and communication development. The motor and sensory processes needed to be developed in order to achieve educational goals. MHVI children evidently need to have the same concept presented in a variety of ways. The teacher should be especially creative in order to do this. The teacher of mhvi children needs a number of special skills and may require additional training. This may need to be done on an in-service basis. The teacher should be one member of a multi-disciplinary team working with mhvi children.

Educational Procedures and Provisions

Privately supported organizations were the ones seen as developing programs especially for mhvi children. Parents have been responsible for some of the efforts to provide these educational programs when public agencies have failed to do so. As organizations have developed

services for mhvi children, they have, to a large extent, integrated some or all of these with existing structures affording a basis for integration of the mhvi child with other students. The heterogeneity of programs suggests that little long-range planning has been involved in these services.

Substantial numbers of mhvi children were on waiting lists and remained at home because they had been unable to gain admission to educational programs. State residential programs designed essentially for mentally retarded persons are often overcrowded. Private organizations sometimes exercise more selectivity with those admitted.

Expressed educational concerns, the numbers of children not in subject-oriented curriculums, and the factors considered in grouping mhvi children all suggest a very life- and experience-centered program based on the child's emotional and intellectual readiness. The mhvi child often functions at a developmental age much younger than his chronological age, and therefore, needs to learn basic skills before attempting the more formal academics.

Some General Implications

The needs of the mhvi child may best be met in a comprehensive service center which provides a number of services in one locality. Flexibility and experimentation are important both in administration and educational

procedures. Such a center could provide many resources and afford the quality which comes through specialization, thus confronting the problems of diversity of needs and at the same time promoting this flexibility. There could be a meaningful system of exchange of knowledge and experience between persons of various professions.

In affiliation with these comprehensive services centers, media and instruction materials organizations could use the educational programs as channels through which to test and evaluate materials. Here again the emphasis must be on adequate functioning and quality.

The rising number of multiply impaired children, the severity of their problems, and the lack of services call for bringing in as many resources as possible to meet needs. A part of this program should be research designed to experiment with new ideas and to evaluate current practices.

Chapter 6

SUMMARY

This chapter presents a brief summary of the study of educational needs of mhvi children. The problem, background research and literature, methodology, and findings are reviewed.

DESCRIPTION OF THE PROBLEM

The purpose of this study was to survey the educational needs of the mhvi child in order to formulate implications for the development of instructional materials. The mhvi child was interpreted as a child who has more than one educationally significant handicapping condition, one of which is visual impairment.

The sheer weight of the large number of handicapped persons demands that educational organizations take note of this situation. Although there have been increased services to mhvi children, many needs remain unmet and improvement of present programs is urgently needed.

REVIEW OF RESEARCH AND LITERATURE

Much of what is written about the mhvi child includes only prevalance studies and broad generalizations. Most of this

was reported by persons involved in specific projects for mhvi children. Surveys supported the statement that a substantial percentage of handicapped children have more than one handicap. An increase in the number of multi-handicapped children was projected for the foreseeable future.

A review of the literature revealed differing opinions and unanswered questions concerning educational theory and practices. Terminology was not well defined and was often used interchangeably. Previous and current systems of classification have leaned heavily on medical categorizations.

Emotional disturbance and retardation were common diagnoses for mhvi children. A large percentage of mhvi children were reported as functioning on an elementary level and progressing very slowly. Despite the best use of available diagnostic tools, some mhvi children remained an enigma.

RESEARCH METHODOLOGY

Because there has been recent expansion of interest in the problems of the mhvi person and because of the development of new programs, it seemed advisable to utilize a survey method to investigate current evolvements. It was concluded that a questionnaire should be sent to persons working in educational programs serving mhvi children.

A list of 293 organizations serving mhvi children was compiled from organizations suggested by the area of trustees of the American Printing House for the Blind and a list of organizations

serving visually handicapped children. This list contained a variety of types of organizations and gave a widespread geographical representation within the United States.

A questionnaire was developed and sent to these 293 organizations. It requested information on the following:

1. Organizational structure of the programs
2. Age distribution of the children
3. Factors used in determing grouping procedures
4. Number of children needing individual instruction most of the time
5. Educational tasks held to be most significant
6. Outstanding problems which interfered with the learning process
7. Learning modes used
8. Number of verbal and non-verbal children
9. Percentage of time spent in various instructional areas
10. Number of children who had applied but were not admitted during the past twelve months
11. Indications of types of additional handicapping conditions
12. Types of instructional materials needed and types of materials held to be most beneficial.

The questionnaire was divided into two sections. Section A was to be completed by a program administrator or instructional supervisor; Section B was to be completed by the person working directly with the children most of the time.

Four weeks after the initial mailing of the questionnaire, a personal letter was mailed to each person who had not returned the form. Eight weeks after the initial mailing a shortened form was mailed. Replies were received from 258 (88 percent)of those organizations contacted. Replies from ninety-six organizations indicated their programs did not meet the criteria for this study. Of the 159 questionnaires received, 135 were long forms and twenty-four were the shortened forms. This was a return of 81 percent of the 197 possible programs.

FINDINGS

1. The majority (65 percent) of the mhvi children reported were in programs designed primarily to serve visually impaired children. Fifty-eight percent of the children were in state residential programs. Sixty-one percent of the children reported were in programs serving fifty or fewer mhvi children. Eighty percent of the organizations participating in this study were supported largely with public funds.

All of the organizations participating had education as their main function. Some considered other services to be of equal importance.

Fifty-seven percent of the organizations had programs during the regular school term only. Thirty percent were in operation for the entire year with 2 percent closing for one month only. Fifty-one percent of the organizations provided services on a daytime basis only.

2. Nearly one half of the children reported were thirteen or older.

3. General intellectual functioning and need for integration with other students were the factors most often indicated as determinant in grouping mhvi children. Only 45 percent were considered as being in a subject-oriented curriculum.

4. Seventy-six percent of the mhvi children in this study were classified as needing individualized instruction most of the time.

5. Communication skills development was identified as the area of most significant educational concern.

6. Non-attending behavior, emotional disturbance, experiential deprivation, language and communication problems, and the inability properly to process information and stimuli were the most frequently mentioned problems.

7. Braille users comprised 28 percent of the children reported in this study. Thirty-three percent were print users; 29 percent used large type, and 4 percent utilized regular print. Twenty-seven percent of the children used listening materials only. Twelve percent of the mhvi children reported in this study were identified as using neither braille, print, nor listening modes.

Only 37 percent (1,027) of the mhvi children reported were classified as totally blind. The largest group (1,198) had a visual acuity of 20/200 or less. There were 307 children with a visual acuity better than the legal definition of blindness.

8. Seventy-six percent of the children reported were considered verbal; 24 percent were classified as non-verbal.

9. Respondents reported that they actually spent most of their instructional time in the development of communication skills, cognitive processes, sensory skills, motor skills, and self-care and daily-living skills. These are presented in order of most to least time spent.

10. During a period of twelve months, 115 organizations denied admission to an average of 5.77 mhvi children per organization.

11. There was an average of 3.28 handicaps per child reported for the children in this study. Mental retardation, speech defects, and emotional disturbance were the most frequently occurring handicapping conditions in addition to visual impairment.

12. Communication skills, self-concept formation, sensory development, and motor skills were the four areas in which respondents ranked the need for instructional materials as being greatest. Motor skills, communication skills, and sensory development were the areas in which were given the most suggestions of materials which had been beneficial.

The types of materials suggested as beneficial were very similar to materials used by very young children. It was requested that materials be developed to teach basic skills on an elementary level. Durability was a key factor proposed as essential in materials for mhvi children.

STUDY REPORT:
INSTRUCTIONAL MATERIALS FOR MULTI-HANDICAPPED VISUALLY IMPAIRED CHILDREN

The multi-handicapped visually impaired child has become a topic of increased interest and concern. There have been increases in the number of services for children who have one or more major handicaps in addition to visual impairment. The rapidly expanding birth rate, high incidence of disability with a much higher survival rate among premature infants--and rubella epidemics have all contributed to the growing numbers of such children.

Under the auspices of the Instructional Materials Reference Center located at the American Printing House for the Blind in Louisville, Kentucky, a survey of materials needs for the mhvi child has been made. This survey was divided into three phases. The first was a background study of the literature on the mhvi child. The second involved the development and administration of a questionnaire which was sent to educational organizations serving mhvi children. Finally information was obtained through intensive interviews conducted with administrative and teaching personnel from a number of selected programs.

REVIEW OF THE LITERATURE ON THE MHVI CHILD

The literature on the mhvi child makes only a few specific references to instructional materials. These references most often refer to materials which might be used with younger children. A number of organizations were able to use regular educational nursery materials. Some organizations indicated that they designed their own materials. Readiness materials and materials for the development of basic skills were also utilized.

A need for more records and tapes was expressed. It was stated that it has been difficult to find high-interest, low-vocabulary materials.

A SUMMARY OF THE DATA REPORTED IN THE QUESTIONNAIRE STUDY WHICH ARE ESPECIALLY SIGNIFICANT IN THE DEVELOPMENT OF INSTRUCTIONAL MATERIALS

A two-part questionnaire was developed and sent to 293 organizations which had been identified as possibly having educational programs for mhvi children. These organizations had a variety of types of programs for mhvi children and provided a widespread geographical representation. Section A of the questionnaire was completed by 169 persons, while section B had 337 respondents participating.

The mhvi child was generally depicted as a child with complex needs. Key characteristics of the mhvi children reported in this study were as follows:

1. Seventy-six percent were classified as requiring individualized instruction most of the time.

2. Nearly one half were thirteen or older.

3. Twenty-four percent were considered as being non-verbal.

4. The mode of learning used was reported as follows:

   a. Braille--28%

   b. Large Type--29%

   c. Regular Type--4%

   d. Listening Materials Only--27%

   e. None of the Above--12%

5. Visual acuity was reported as follows:

   a. Totally Blind--37%

   b. Visual Acuity of 20/200 or less--43%

   c. Visual Acuity between 20/200 and 20/20--11%

   d. Severe Peripheral Loss--6%

   e. Degree of Vision Unknown--9%

6. Fifty-five percent were not classified as being in an academic subject-oriented curriculum.

7. Sixty-one percent were in programs with fifty or fewer mhvi children.

8. An average of 3.28 handicaps per child was indicated. Visual impairment, mental retardation, speech defects and emotional disturbance were the handicapping conditions of most frequent occurrence.

9. The four problems which most hinder learning were designated as:

   a. Non-Attending Behavior

   b. Emotional Distrubance

c. Experiential Deprivation

d. Communication and Language Problems

The educator must have a variety of materials which utilize different learning modes. He must also attempt a number of approaches and methods. A great deal of creativity is required to communicate with a child who uses neither braille, print, nor listening modes.

A child who shows non-assertive or withdrawal behavior and who requires individualized instruction may be particularly difficult to motivate. Instructional materials need to be designed to encourage independent functioning as much as possible in order to free the teacher to work with other students. Many materials will not interest the child and therefore the selection of materials is especially important.

Listening materials apparently can be used with the largest number of mhvi children. There were more print users than braille users reported.

Because there are small number mhvi children located in any one locality, materials should be as multi-purposive as possible. This is also true in the light of the diversity of needs and types of handicapping conditions. For example, one special need is the adaptation of materials for the older child who is functioning on a very elementary level.

INFORMATION ON THE EDUCATIONAL NEEDS OF THE MHVI CHILDREN REPORTED IN THIS STUDY

Areas of Educational Concern Reported as Most Significant for MHVI Children

Respondents indicated communications skills as the area of most significant educational concern for mhvi children. A closely ranked second was the development of self-care and daily-living skills.

Responses on the long and shortened form differed significantly (at the .001 level). There was agreement that communication skills was the area of most concern. The difference was largely between the emphasis placed on (1) self-concept formation and emotional development and (2) academic content and skills. The long form respondents gave less priority to self-concept formation and emotional development. Academic content and skills were held as less significant by the persons responding to the shortened form than by those who completed the long form.

Analysis of Instructional Time

Respondents were asked to indicate the percentage of instructional time spent in various areas. This information was analyzed in two ways. First, a rank number of one to eight was assigned to each area with one indicating the area of most time spent and eight, the least. Second, an average of the percentage of time was obtained for each area. Some answers could not be used for this second measure because a base of greater than one hundred percent had been used by respondents.

The rank order of the instructional areas was as follows:

1. Communication Skills
2. Cognitive Processes
3. Sensory Development
4. Motor Skills
5. Self-Care and Daily-Living Skills
6. Self-Concept Formation
7. Mobility or Premobility Skills
8. Other

There was a difference in rank ordering using the two methods of analysis of this data. Motor skills, self-care and daily-living skills, and sensory development took a slightly different rank position. There was a difference of less than one percent of the mean scores of these three areas.

The Spearman rank correlation coefficient was applied to measure the association between the two samples. There was a posible relationship (r_s=.93) between the two forms significant at greater than the .01 level.

Reported Differences in Educational Programming for the MHVI Child and the Child with Visual Impairment Only

When asked to indicate the differences in educational programming for a mhvi child and a child with visual impairment as the only handicap, the respondents cited the emphasis in curriculum.

It was held that the curriculum should be more experience- and life-centered and that it should stress concreteness. Second, the persons responding to this question pointed out the need to work in the area of language and communication development. Greater use of repetition was held to be especially essential in the learning process. Another often repeated need was that of instructional materials especially designed for mhvi children.

INFORMATION ON INSTRUCTIONAL MATERIALS NEEDS OF THE MHVI CHILDREN REPORTED IN THIS STUDY

Instructional Materials Needs

Respondents ranked seven areas according to the need for instructional materials. These areas were so ordered beginning with the area of most need:

1. Communication Skills
2. Self-Concept Formation
3. Sensory Development
4. Motor Skills
5. Cognitive Processes
6. Self-Care and Daily-Living Skills
7. Mobility and premobility Skills.

Suggestions of the Most Beneficial Instructional Materials

When asked to comment on instructional materials, teachers frequently responded with their feelings of inadequate knowledge of what was available and of how to select materials.

They felt there was a need for development of materials in all areas, but that these must be especially designed for the mhvi child. Another reply indicated repeatedly was the opinion that there were few suitable materials available.

Suggestions of the most beneficial materials for each of the instructional areas were made. In order of the greatest number of suggestions made by the 215 respondents, the areas would rank as follows:

1. Motor Skills
2. Communication Skills
3. Sensory Development
4. Cognitive Processes
5. Self-Care and Daily-Living Skills
6. Mobility and Premobility Skills
7. Self-Concept Formation.

Listed by area, the specific instructional materials most often suggested as beneficial are:

1. Motor skills development
    a. manipulative materials such as weaving, knitting, or crocheting materials
    b. pegboards
    c. beads for stringing
    d. Constructo sets
    e. put-together toys
    f. nesting cups
    g. clay or modeling materials

h. ceramics or sculpturing materials

i. building blocks

j. snapbeads

k. sets of locks or fasteners

l. Montessori equipment

m. large crayons

n. tools

o. riding toys

p. skates

q. climbing apparatus (tunnels, stairs, bars, balance boards, obstacle course, ladders, etc)

r. balls

s. rhythm records

t. trampolines

u. gym mats

v. swimming pools

w. exercisers

2. Mobility and premobility skills

a. audible goal indicators

b. canes

c. walkers

d. balance beams

e. parallel bars

f. hand rails

g. audible compasses

h. balls with bells

i. directional games

j. models of school grounds

k. stairs

l. incline ramps

3. Self-concept formation

a. records dealing with identification of body parts

b. mirrors

c. life-size body models

d. people puzzles

e. dolls

f. books on the individual, family, and community

4. Communication skills

a. Peabody Language Development kits

b. auditory training units

c. language masters

d. braillers

e. tape recorders

f. listening records

g. listening booths

h. word games

i. phone trainer units

j. speech development records

k. vocabulary aids

5. Self-care and daily-living skills
    a. dressing frames
    b. self-care tools (such as combs)
    c. large type print cookbooks
    d. kitchen work areas
6. Sensory development
    a. puzzles
    b. touch and tell books
    c. tactual materials
    d. clay
    e. finger paints
    f. beaded letters (also sandpaper letters)
    g. "smell" kits
    h. rhythm instruments
    i. shaped objects for matching
    j. sorting and discrimination materials
    k. sound cylinders
    l. sorting boards or trays
    m. fabrics
    n. recorded sounds
    o. weight discrimination sets
    p. tuning forks
    q. pianos
    r. audio-visual training materials
    s. braille readiness books

7. Cognitive processes
    a. abacuses
    b. number games
    c. clock faces
    d. calendars
    e. geometric inset puzzles
    f. number aids
    g. number lines
    h. Stern materials
    i. sequential pictures
    j. measuring utensils
    k. Mitchell wire forms
    l. blocks for sorting and matching
    m. puzzles.

Suggestions of Instructional Materials Which Need to Be Developed

Respondents proposed a number of general suggestions concerning materials needs. They stated that there need to be more materials which:

1. Relate to practical and real situations
2. Are of a high-interest, low-vocabulary nature
3. Are for mentally retarded blind children
4. Focus on concreteness, physical attractiveness, and flexibility

5. Use color (especially in large type materials)
6. Meet the needs of the older child with low functioning
7. Are especially sturdy and durable
8. Emphasize prevocational and vocational skills
9. Creatively present basic concepts in a variety of ways
10. Can be used as games for older children
11. Can be used by parents
12. Utilize listening skills at the levels of low-functioning children
13. Are multi-sensory and multi-purposive
14. Stress sequential learning
15. Feature communications skills development as a primary focus.

Suggestions of instructional materials which needed to be developed were made by 180 respondents. The largest number of suggestions was in the areas of motor and communication skills. Listed according to areas, the most frequent suggestions were:

1. Motor skills
    a. materials for the development of finger dexterity and hand usage
    b. playground equipment and riding equipment large enough for older children
    c. simplified puzzles
    d. more manipulative materials which are large enough to teach basic movements

e. specific task materials to teach actions such as the opening of lids, turning of door handles, etc.

f. simple put-together or interlocking toys

2. Premobility and mobility

a. simple three dimensional models of town or geographical areas

b. toy or playground equipment which can help develop directional concepts

c. scale models of houses and other large structures

d. equipment for children at the pre-walking or pre-crawling stage

3. Self-concept formation

a. realistic and life-size models of the body

b. stories or books dealing with the "self" and relationships with other persons

c. take-apart dolls

4. Communication skills

a. more high-interest, low-level reading materials in large type print and braille

b. more high-interest, low-vocabulary tapes

c. materials to stimulate speech in a child who is non-verbal

d. records to use in teaching sound discrimination

e. language cards with easily discernible pictures

5. Self-care and daily-living skills
   a. inexpensive self-care kits
   b. high-interest, low-vocabulary vocational materials
   c. simplified cookbooks
6. Sensory development
   a. kits for the development of touch, smell, and taste
   b. records for sound identification at basic levels
   c. easily discernible pictures and visual materials for the development of visual discrimination
   d. scaled realistic models of large objects and animals
7. Cognitive processes
   a. practical math guides, texts, and workbooks
   b. simple materials to help children learn to organize concepts
   c. games which incorporate reasoning processes
   d. simple models of operational devices such as motors or pumps
   e. materials which can aid in teaching the concept of cause and effect
   f. materials for children with perceptual problems
   g. listening materials to stimulate discussion on subjects such as home, foods, safety, etc.
   h. pictures for the teaching of sequential events
   i. models of growth processes
   j. materials to help in the development of basic abstract ideas.

Basic Facilities Needed

Respondents to the questionnaire indicated that the mhvi child especially needs facilities other than the classroom. They suggested the following:

1. a gymnasium
2. a physical therapy room
3. an apartment or house which can be used as a home living area
4. a kitchen or home economics department
5. an outdoor playground

SUMMARY OF INFORMATION ON INSTRUCTIONAL MATERIALS FOR MHVI CHILDREN

Instructional materials needs. Communication skills, self-concept formation, sensory development, and motor skills were the four areas in which respondents ranked the need for instructional materials as being greatest. Motor skills, communication skills, and sensory development were the areas in which were given the most suggestions of materials which had been beneficial. It was in these same three areas where persons were able to make the most suggestions of specific materials needing to be developed. Self-concept formation ranked last in the number of suggested materials that have been beneficial.

The types of materials suggested as beneficial were very similar to materials used by very young children. The New York Institute for the Education of the Blind found regular educational nursery materials to be useful in a special program for mhvi

children.[1] The types of materials most frequently suggested were those which are designed to teach basic skills at an elementary level. Best and Winn found readiness materials to be of value.[2]

Teachers frequently attested to a feeling of inadequacy of knowledge of the availability and best selection of materials. This may be both a cause and a result of the fact that literature on mhvi children deals very little with instructional materials. There were repeated requests for assistance in this area as well as suggestions that a means of an interchange of information should be promoted. Several respondents suggested that institutes on instructional materials are highly desirable.

Ideally, the facilities for a program for mhvi children should include a variety of provisions geared especially for the development of physical abilities and practical living skills. The suggestions of facilities for a program for mhvi children should include a variety of provisions geared especially for the development of physical abilities and practical living skills. The suggestions of facilities were very ordinary. There appeared to be less focus on formal, rather than on informal, academic classroom arrangement.

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[1]Merle Frampton and others, Forgotten Children, A Program for the Multihandicapped (Boston: Porter Sargent Publishers, 1969), p. 186.

[2]John P. Best and Robert J. Winn, Jr., "A Place to Go in Texas," International Journal for the Education of the Blind, 18:7, March, 1968.

Principles for materials development. The mhvi children in this study need materials which are multi-purposive and multi-sensory. Respondents in the study proposed that these materials need to be especially attractive, durable, and practical. Practicality was indicated as a key feature for which to look. It was stated that materials need to emphasize basic skills development and simplicity. Communication skills development was suggested as the area of most critical need.

VISITS TO ORGANIZATIONS SERVING MHVI CHILDREN

Purpose of Visits

The purpose of these visits was to gain first hand information as to the educational program for mhvi children, discuss materials needs, to evaluate types of materials which had proved useful to mhvi children, and to obtain suggestions for materials which should be developed or adapted.

Organizations of Persons Visited

1. Callier Hearing and Speech Center, Dallas, Texas
2. Dr. Ed. Hammer, Coordinator for the Louisana, Texas, and Oklahoma Center for Services to Deaf-Blind Children
3. Joaquin Miller High School, Los Angeles, Cal.
4. Sven Lokrantz Elementary School, Los Angeles, Cal.
5. Meeting of the Los Angeles County Association of Special Educators, Teachers of the Visually Handicapped
6. Instructional Materials Center, Los Angeles,California

7. Department of Special Education, Los Angeles Unified School District, Mr. Ralph Salaway, Supervisor of Blind and Partially Seeing
8. Miss Joan Sweeny, Consultant in Education of the Visually Handicapped for Southern California
9. Foundation for the Junior Blind, Los Angeles, Cal.
10. Blind Children's Center, Los Angeles, Cal.
11. Oregon State School for the Blind
12. California State School for the Blind
13. Mr. Paul Starkovich, Northwest Area Coordinator for Services to Deaf-Blind Children
14. Washington State School for the Blind
15. Illinois Braille and Sight-Saving school Unit and Special Classes for mhvi children

General Report on Organizations Visited

The organizations visited revealed that moves have been made toward serving lower functioning children and children with more complicated problems. This was true even in the public school programs. There were also efforts being made to reach mhvi at young ages--some of these children were babies in their first two years of life.

A couple of the residential programs visited were geared almost completely to serving children who could not fit into local day programs; most of these children were multiply handicapped. Personnel at one school indicated that they were shortening their evaluation period and were beginning to send some of their children with very limited functioning back to their homes.

There appeared to be a very clear division in the organizational structure of the educational provisions for visually impaired children who have other handicaps. One provision is made on the basis of an adapted academic program; the other emphasizes training in practical living and socialization skills.

Well over seventy-five percent of the young mhvi children seen, especially deaf-blind children, were possible large type users. The curriculum did not appear to be largely textbook oriented. It was geared more to actual life situations than to a formal academic structure.

Teachers who appeared to be doing the best work with their students had spent a great deal of time making their own materials. Most of the teachers were eager to discuss their work. They stated they often found problems with the usefulness of materials purchased and were left with items which they could not use. This was due to the fact that too much was required of the child at one time and the wide range of needs presented by these children.

Many of the teachers contacted expressed a need for assistance in knowing available resources of materials and how to select these. Instructions as to ways the materials can be used should accompany instructional materials.

Suggestions of materials which need to be developed

1. Listening banks or group earphones - set of four for tape recorders and talking book machines.
2. Language cards - clear pictures with color
3. Simple manipulative materials
4. Large domino blocks

5. Large print paper with a middle guide line
6. A pusher to aid in developing eating skills
7. Textured materials - all of the same color
8. Simplified calendars
9. Basic listening materials - beginning with auditory training
10. Letter guides - to be used for printing - use line to indicate the bottom
11. Simplified puzzles (wooden) with holes in bottom to help in removal of pieces. (form boards)
12. A sound box
13. A simplified dictionary
14. A simplified atlas
15. Arithmetic flashcards
16. Colored braille paper
17. Touch keyboard with sounds for each key
18. Beginning braille instruction for adolescents
19. Large braille slate
20. Slides for teaching visual discrimination
21. Books with stronger pages
22. Reusable acetate workbook overlays
23. Sound boxes or cylinders - also to be used for teaching weight discrimination
24. Board for matching tasks with lights and sounds which indicated correct responses
25. Magnetic boards - to teaching matching of shapes, etc.
26. Large cycle and riding toys for older children

27. Sorting trays
28. Peg boards with large head pegs
29. A catalogue with listing of materials which are especially useful
30. Curriculum guides - especially for prevocational and practical living skills for high school age students who function very poorly in academic programs
31. High-interest, low-vocabulary texts

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APPENDIXES

APPENDIX A

1. First Letter to Area Trustees
2. Second Letter to Area Trustees

American Printing House for the Blind
INCORPORATED
FINIS E. DAVIS, VICE PRESIDENT AND GENERAL MANAGER
1839 FRANKFORT AVENUE
MAILING ADDRESS: P. O. BOX 6085
LOUISVILLE, KY. 40206

October 10, 1969

Mr. Fusao Uchiyama, Adm.
Hawaii State Dept. of Education
Honolulu District Office
1037 S. Beretania St.
Honolulu, Hawaii 96814

Dear Mr. Uchiyama:

The Instructional Materials Reference Center is making a study of the multi-handicapped visually impaired child to determine guidelines and needs in the development of instructional materials. This study involves the child who has two or more disabilities (one being a visual handicap) which make it difficult to profit from the established program for visually handicapped. Your assistance is needed in locating educational programs in your state which are presently serving these children. Would you complete and return the information form below? Please feel free to use an additional sheet. Types of programs may be day or residential, public or private with integrated or separated facilities. Please include also programs basically designed for other handicapping conditions which have included visually handicapped children. Examples of this would be programs for retarded or cerebral palsied children.

Name of Program	Address	Type of program	Approx. No. multi-handicapped

Thank you for your help.

Very truly yours,

Mrs. Charles S. Leach
Materials Development and
Evaluation Specialist

American Printing House for the Blind
INCORPORATED
FINIS E. DAVIS, VICE PRESIDENT AND GENERAL MANAGER
1839 FRANKFORT AVENUE
MAILING ADDRESS: P. O. BOX 6085
LOUISVILLE, KY. 40206

November 3, 1969

Mr. Fusao Uchiyama, Adm.
Hawaii State Dept. of Education
Honolulu District Office
1037 S. Beretania St.
Honolulu, Hawaii 96814

Dear Mr. Uchiyama:

This is to remind you of our request for a list of programs which serve the multi-handicapped visually impaired child in your state. The Instructional Materials Reference Center is attempting to formulate guidelines for the development of instructional materials for the child who has other major handicaps in addition to visual disability. We need the following information about your state's programs:

Name of Program or School	Address	Approx. No. Multi-handicapped

Thank you for your assistance.

Truly yours,

Mrs. Charles S. Leach
Materials Development and
Evaluation Specialist

APPENDIX B

1. Letter of Transmittal
2. Long Form Questionnaire
3. Follow-Up Letter

American Printing House for the Blind
INCORPORATED
FINIS E. DAVIS
VICE PRESIDENT AND GENERAL MANAGER

1839 FRANKFORT AVENUE
MAILING ADDRESS: P. O. BOX 6085
LOUISVILLE, KY. 40206

AREA CODE 502
TELEPHONE 895-2405

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PRESIDENT

CHARLES W. ALLEN, JR.
VICE PRESIDENT

FIRST NATIONAL BANK
OF LOUISVILLE
TREASURER

November 26, 1969

Mr. Lowell E. Holland, Supervisor
Kansas Rehabilitation Center
2516 West 6th Street
Topeka, Kansas 66606

Dear Mr. Holland:

The Instructional Materials Reference Center is making a study of the multi-handicapped visually impaired child to determine needs and guidelines in the development of instructional materials. This study involves "the visually handicapped child who has one or more additional disabilities so severe that it is difficult or impossible to profit from the established program for visually handicapped children."

May we request that you fill out the enclosed questionnaire and return it as soon as possible. The questionnaire has been divided into two sections. Section B is to be completed by the person(s) who has the most first-hand involvement with the multi-handicapped visually impaired child. For this reason, more than one copy of Section B are enclosed.

There have been substantial increases in the numbers of multi-handicapped visually impaired children. You have very likely seen indications of this in your own work. This study is being done in response to the increased interest in these children.

Your efforts in providing the requested information will be greatly appreciated and should help to further our meeting the needs of children who have handicaps in addition to visual impairment.

Sincerely yours,

Mrs. Charles S. Leach
Materials Development and
Evaluation Specialist

Enclosure

Return to: Mrs. Charles S. Leach
Instructional Materials Reference Center
American Printing House for the Blind
1839 Frankfort Avenue
Louisville, Kentucky 40206

Name of School and/or Program_____

Address_____

Person providing this information_____

Title_____

For what type(s) of handicapped child(ren) is this program designed?_____

For what period of time does this program operate?

check one	
entire year	
summer only	
regular school term only	
other (please specify)	

What primary type of service is provided

check one	
evaluation and diagnosis	
treatment or therapy	
other (please specify)	

THE REMAINING QUESTIONS REFER TO THE MULTI-HANDICAPPED VISUALLY IMPAIRED (mhvi) CHILD ONLY. IF YOU DO NOT HAVE MULTI-HANDICAPPED VISUALLY IMPAIRED CHILDREN, PLEASE RETURN THE FORM WITHOUT ANSWERING THE FOLLOWING QUESTIONS. Please answer the questions in reference to "the visually handicapped child who has one or more additional disabilities so severe that it is difficult or impossible to profit from the established program for visually handicapped children." Please feel free to make comments in margins and extra space.

SECTION A

1. How many multi-handicapped visually impaired children are enrolled in the program?

_____ number

2. Which of the following best describes the organization structure of your program?

check one	
entire school is for mhvi	
a separate unit for mhvi	
special class(es)	
mhvi children are integrated with other children	
other (please specify)	

3. Please give the number of mhvi children for each of the following age groupings:

ages	number mhvi
0-5	
6-9	
10-12	
13-21	

4. How many of the mhvi children in your program are enrolled in a subject oriented curriculum? (Such as English, math, social studies, etc.)

_____ number

5. How many mhvi children who could not be admitted (for reasons other than age) have been in contact with this program during the past 12 months?

_____ number

6. How are the mhvi children grouped or graded? (Please give the number in each group)

description of grouping	number in group

7. Please give the number of mhvi children who have the following conditions:

condition	number
mental retardation	
hearing impairment	
cerebral palsy	
cardiac disturbance	
speech defect	
epilepsy	
brain damage	
orthodontic defect	
orthopedic defect	
cosmetic defect	
emotional disturbance	
other (please specify)	

8. Please give the number of mhvi children with the following degree of vision:

degree of vision	number
totally blind	
how many of these were blind before age 3?	
visual acuity of 20/200 or less	
visual acuity between 20/200 and 20/20	
severe loss of "field" (peripheral vision)	
degree of vision unknown	

Name of person completing section_____

Group with whom you work_____

In answering the questions in this section, please think of the multi-handicapped visually impaired (mhvi) child as "the visually handicapped child who has one or more additional disabilities so severe that it is difficult or impossible to profit from the established program for visually handicapped children." You may feel free to write additional comments in the margins or extra space.

SECTION B

1. How many mhvi children with whom you work require individualized instructions most of the time because they do not function well in a group?

_____ number

2. Please list the three educational tasks or skills which you feel are most significant for mhvi children?

3. What three problems most hinder learning by mhvi children? (Please list in order of most frequent occurrence.)

4. Please give the number of mhvi children using the following learning modes:

mode	number
braille	
large or clear type print	
regular print	
listening materials only	
none of these	

5. Please give the number of mhvi children in the following categories:

	number
non verbal - a child who does not use language as a means of communication	
verbal - a child who has demonstrated the ability to use language	

6. What percentage of the formal instructional time is spent developing the following:

	percentage of time
motor skills	
mobility or premobility skills	
self concept formation	
communcation skills	
self care and daily living skills	
sensory development (visual, auditory, etc.)	
cognitive processes (attention span, number concepts, etc.)	
other (please specify)	

7. What major educational needs differences do you see between the multi-handicapped visually impaired child and the child who does not have other major handicapping conditions besides visual impairment?

8. Please rank the instructional areas as to those in which you find the greatest need of materials for the mhvi child. (Write 1 beside the area of greatest need, 2 for the next, and 3 for the third, etc.)

code
1 - greatest need
2 - next greatest need
3 -
4 -
5 -
6 -
7 -
8 - least need

	rank number
motor skills	
mobility or premobility skills	
self concept formation	
communication skills	
self care and daily living skills	
sensory development	
cognitive processes	
other (please specify)	

9. What instructional materials have proven the most beneficial for the mhvi children for the fostering of:

a.. motor skills?

b. mobility and premobility skills?

c. self concept formation?

d. communication skills?

e. self care and daily living skills?

f. sensory development?

g. cognitive processes?

10. What instructional materials do you feel need to be developed for the mhvi in the fostering of:

a. motor skills?

b. mobility and premobility skills?

c. self concept formation?

d. communication skills?

e. self care and daily living skills?

f. sensory processes?

g. cognitive processes?

American Printing House for the Blind

INCORPORATED

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VICE PRESIDENT AND GENERAL MANAGER

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CHARLES W. ALLEN, JR.
VICE PRESIDENT

FIRST NATIONAL BANK OF LOUISVILLE
TREASURER

December 31, 1969

Dear Colleague:

During the first week of December questionnaire forms were mailed to you concerning a study of multi-handicapped visually impaired children. It is hoped that you will be able to participate in this study.

It may be that we need to assist you in some way. Would you indicate this by checking the appropriate blank below or by making any comment you feel necessary? It is important for us to know if you are not presently serving multi-handicapped visually impaired children.

Thank you for your cooperation.

Sincerely,

Mrs. Charles S. Leach
Instructional Materials Reference Center

_____Please send additional forms. Number needed:
_____Section A (general information)
_____Section B (for each teacher)

_____We plan to participate in the study and forms will be completed about:
_____.
Month Day

_____We have already mailed completed forms.

_____We do not plan to participate in this study for the following reason:

_____

Name_____

Organization_____

Address_____

APPENDIX C

1. Letter of Transmittal
2. Shortened Form Questionnaire

American Printing House for the Blind
INCORPORATED
FINIS E. DAVIS
VICE PRESIDENT AND GENERAL MANAGER

1839 FRANKFORT AVENUE
MAILING ADDRESS: P. O. BOX 6085
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CHARLES W. ALLEN, JR.
VICE PRESIDENT

FIRST NATIONAL BANK OF LOUISVILLE
TREASURER

February 6, 1970

Mr. Richard L. Johnson
Exceptional Child Services Department
6404 Linda Vista Road
San Diego, California 92111

Dear Mr. Johnson:

Your participation in our study of multi-handicapped visually impaired children can be very significant in providing the most reliable information to guide us in helping to meet the needs of these children. If you have been unable to participate prior to this date, we would urge you to complete the questionnaire you received in December and return it to us as soon as possible. Abbreviated forms are enclosed, if for any reason, you can not give full participation in this study. All questions require very brief answers which would give at least a part of the information needed while not calling for a great deal of your time.

If you are not presently working with visually impaired children who have additional handicaps, please check the blank below and return this letter in the enclosed stamped envelope.

The study is concerned with "the visually handicapped child who has one or more additional disabilities so severe that it is difficult or impossible to profit from the established program for visually handicapped children." In other words, this child will have to have special educational provisions because of handicaps other than visual impairment. There are two pages of information requested. Section A requires generalized information on the entire program. Section B is to be completed by the person(s) who has the most first-hand involvement with the multi-handicapped visually impaired (mhvi) child. More than one copy of Section B are enclosed. If your program includes only a few children, one person may complete both sections.

Thank you very much for your cooperation and concern.

Sincerely,

Mrs. Charles S. Leach

Enclosures

___We are not presently serving multi-handicapped visually impaired children.

Other comments:

Return to: Mrs. Charles S. Leach
Instructional Materials Reference Center
American Printing House for the Blind
1839 Frankfort Avenue
Louisville, Kentucky 40206

Name of School and/or Program _____

Address _____

For what period of time does this program operate?

check one	
entire year	
summer only	
regular school ter only	
other (please specify)	

What primary type of service is provided?

check one	
evaluation and diagnosis	
treatment or therapy	
education	
other (please specify)	

SECTION A

1. How many multi-handicapped visually impaired children are enrolled in the program?

_____ number

2. Which of the following best describes the organizational structure of your program?

mhvi - multi-handicapped visually impaired

check one	
entire school is for mhvi	
a separate unit for mhvi	
special class(es)	
mhvi children re integrated with other children	
other (please specify)	

3. Please give the number of mhvi children for each of the following age groupings:

ages	number mhvi
0-5	
6-9	
10-12	
13-21	

4. Please check the four factors you feel most significant in grouping mhvi children.

____Age
____Size
____Social Level
____Teacher Ratio
____Activity Level
____Intellectual Functioning
____Readiness Grouping
____Type of Other Handicaps
____Vocational Training
____Mode of Reading
____Need for Individual Attention
____Integration with Other Children
____Broadly Graded Groupings
____Grouped for Subject or Skill Area
____Other than listed (please specify)

SECTION B

1. How many mhvi children with whom you work require individualized instruction most of the time because they do not function well in a group?

   _____ number

2. Please rank the three educational areas which you feel are most significant for mhvi children. Put a 1 beside the area of most significance, 2 for the next and 3 for the third.

____Motor Skills	___Communication	___Socialization Skills
____Orientation and Mobility	___Self Care and Daily Living	___Academic Content
____Self Concept Formation	___Sensory Development	___Other (please specify)
____Emotional Development	___Cognitive Processes	

3. In the same way, please rank the three problems which most hinder learning by mhvi children. Put 1 beside the greatest problem, 2 for the next and 3 for the third.

___Non Attending Behavior	___Inability to Follow Instructions or Directions
___Experiencial Deprivation	___Need for Individual Instruction or Attention
___Non Assertive Behavior	___Physical Handicaps Other than Visual
___Emotional Disturbance	___Unacceptable Social Skills
___Lack of Educational Provisions	___Other (please specify)
___Mental Retardation	
___Communication and Language	
___Cognitive Processing.	
___Adjustments to and Poor Use of Vision	
___Poor Orientation and Mobility Skills	
___Lack of Self Help and Daily Living Skills	

4. Please give the number of mhvi children using the following learning modes:

mode	number
braille	
large or clear type print	
regular print	
listening materials only	
none of these	

5. Please give the number of mhvi children in the following categories:

	number
non verbal - a child who does not use language as a means of communication	
verbal - a child who has demonstrated the ability to use language	

6. Please rank the instruction areas as to those in which you find the greatest need of materials for the mhvi child. (Write 1 beside the area of greatest need, 2 for the next 3 for the third. Please rank all eight possibilities)

code
1 - greatest need
2 - next greatest need
3 -
4 -
5 -
6 -
7 -
8 - least need

	rank number
motor skills	
mobility or premobility skills	
self concept formation	
communication skills	
self care and daily living skills	
sensory development	
cognitive processes	
other (please specify)	

1/18/2013
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HF GROUP - IN